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Literacy Appraisal in the Early Years:
A Research Literature Survey

By K. J. Topping for the Scottish Government

The abstracts are arranged in the following categories. You can click on the link to go to that category. Within each category, the items are arranged alphabetically by surname of the first author.

LITERATURE ABSTRACTS

BOOKS

Assessment in Early Childhood Settings: Learning Stories
Margaret Carr
This book shows that an early childhood setting can be described as a learning place in which children develop learning dispositions such as resilience in the face of uncertainty, confidence to express their ideas, and collaborative and thoughtful approaches to problem-solving. These dispositions provide the starting point for life-long learning. The author asks: How can we assess and track children's learning in the early years in a way that includes learning dispositions and avoids the pitfalls of over-formal methods, whilst being helpful for practitioners, interesting for families, and supportive for learners? The book

- describes a way of assessment that stays close to the children's real experiences and provides an alternative to mechanistic and fragmented approaches,
- shows how practitioners can assess what really matters: those learning dispositions (interest, involvement and perseverance for example) that provide a foundation for life-long learning.

The book is about weaving theory and practice: theorizing development and learning as reflected in assessment practice. The author also argues that unless we find ways to assess complex outcomes in early childhood they will be excluded from the teaching and the learning. Simple and low level outcomes and goals will take their place. The theoretical ideas and arguments are illustrated throughout by transcripts and stories of children in a range of early childhood settings. At every turn in the journey it asks: How is this reflected in a real life context? It documents the voices of children, practitioners and parents as the learning story develops.

>   Paperback: 224 pages
>   Publisher: Sage Publications Ltd (5 Jun 2001)
>   ISBN-10: 076196794X
>   ISBN-13: 978-0761967941

Essential Kindergarten Assessments for Reading, Writing, and Math
Laurie Fyke
>   Paperback: 176 pages
>   Publisher: Teaching Resources (July 2007)
>   ISBN-10: 0439529786
>   ISBN-13: 978-0439529785

A Practical Guide to Child Observation and Assessment 3rd Edition
Christine Hobart, Jill Frankel, Miranda Walker
This best-selling book has been completely revised to provide a fully up-to-date guide to observation and assessment techniques. Now in full-colour and packed with even more examples, photographs and diagrams, this is the only book students will need to build the skills required by the professional child-care practitioner.

>   Paperback: 200 pages
>   Publisher: Nelson Thornes; 3 edition (4 May 2004)
>   ISBN-10: 0748785264
>   ISBN-13: 978-0748785261

Kindergarten Literacy: Matching Assessment and Instruction in Kindergarten [Paperback]
Anne McGill-Franzen
>   Paperback: 288 pages

Recognising Early Literacy Development: Assessing Children's Achievements
Cathy Nutbrown
This book examines the literacy development and assessment of children before the age of five years. It is highly relevant to all those professionally involved in assessment. Cathy Nutbrown explores the need for appropriate assessment practice to support teachers and illustrates the mismatch between the way teachers and researchers assess literacy. The book is worth buying for the final chapter alone, which provides an analysis of the newly developed Sheffield Early Literacy Development Profile. The actual tasks are included in the appendices. Thus, Cathy Nutbrown does not leave us frustrated. We are able to consider an ongoing assessment which is in tune with the best practice in teaching. Recognising Early Literacy Development presents a new view of the many purposes of assessment in early literacy development. Issues in early literacy assessment, current assessment material, the purposes of literacy assessment, government policy, practice in schools, baseline assessment of literacy, the need for new research measures of early literacy, are all recurrent themes of the book. The author reviews and discusses three decades of policy and practice in assessing literacy development in the years 3 to 5 - from recognising in the late 1960s that literacy in these years exists, to proposals in 1997 for official assessment of literacy at 5 years.

Childhood Observation (Achieving EYPS)
Ioanna Palaiologou
Discussing the role of observation in the Early Years environment, this title helps Early Years students and practitioners understand the principles and ethical guidelines of observation and assessment methods, and encourages them to take a critical stance on different observation methods. It examines current initiatives and policies as a context for discussing the theoretical background, and draws on a number of methodologies in order to develop clear and systematic ways of making observations, recording data and using it to evaluate and assess children.

3-Minute Reading Assessments Prehension: Word Recognition, Fluency, & Comprehension
Timothy Rasinski, Nancy Padak

Language and Literacy 3-7: Creative Approaches to Teaching
Jeni Riley
This practical guide considers the research evidence that is needed to inform enlightened practice, and offers concrete suggestions and teaching approaches for early years settings and classrooms. This comprehensive book shows the 'what' the 'how' and the 'why' of innovative, creative practice for teaching language and literacy. The author clearly examines

how young children learn to use both spoken and written language, and shows how to assess, plan and teach for the effective learning of speaking, listening, reading and writing. Each chapter includes case studies, learning and teaching suggestions and further reading, and topics covered include:

- Learning to communicate
- Developing spoken language in early years settings and classrooms
- The links between oracy and literacy
- The inter-relatedness of the literacy process
- Teaching literacy holistically
- The assessment of language and literacy
- Supporting literacy in Keystage 1, teaching reading and teaching writing for different purposes
- Children and books
- Teaching children for whom English is an additional language
- Language, literacy, learning and ICT.
  Paperback: 280 pages
  Publisher: Sage Publications Ltd (2 Oct 2006)
  ISBN-10: 141291986X
  ISBN-13: 978-1412919869

Observing, Assessing and Planning for Children in the Early Years (Nursery World / RoutledgeFalmer Essential Guides for Early Years Practitioners)
Sandra Smidt
This introductory text shows how, by observing children knowledgeably, practitioners can plan for and assess the young children in their care much more effectively. Observation as a 'tool for learning' has long been considered to be one of the most beneficial ways of teaching the very young, and this book introduces the work of people who have become famous for their skills as observers, exploring the theories behind their work and how this can be related to the day-to-day nursery environment. Sandra Smidt uses case studies throughout to explain in detail how young children's development can be matched to their exact needs and interests, creating a more positive learning experience for all.
    Paperback: 128 pages
    Publisher: Routledge; New edition edition (20 April 2005)
    ISBN-10: 041533974X
    ISBN-13: 978-0415339742

Early Language and Literacy Classroom Observation: K-3 (ELLCO K-3) User's Guide
Miriam W. Smith, Joanne P. Brady, Nancy Clark-Chiarelli
    Paperback: 120 pages
    Publisher: Brookes Publishing Co (1 Mar 2008)
    ISBN-10: 1557669481
    ISBN-13: 978-1557669483
ELLCO helps administrators, supervisors, and program directors gather the crucial data schools need to strengthen classroom quality and build better literacy programs, both by improving teacher development and comparing their practices with others.Originally published in 2002, ELLCO was developed to measure classroom environments and their effects on early literacy and language development in pre-K through third grade. To strengthen the usefulness of the tool and better address the differences in settings between pre-school and early elementary classrooms, the new edition is divided into 2 parts: pre-K and kindergarten through third grade. The tools for each age group are parallel in design and layout with the same scoring system and the same level of guidance for use and interpretation.The new tool now consists of only 2 elements, the Classroom Observation and Teacher Interview. This edition includes descriptors for all 5 scoring levels.The User's

Guides provide more information on how to use and interpret the results, including guidelines for conducting classroom observations, limiting bias in scoring, scoring guidance, providing feedback, research use, and data collection tips. Additions include research-based practices for increasing reading fluency, phonemic awareness, phonics, vocabulary, and more.

RELIABILTY AND VALIDITY OF PREDICTION

Accessible Reading Assessments for Students with Disabilities
Author(s): Abedi, J (Abedi, Jamal)[1]; Bayley, R (Bayley, Robert)[1]; Ewers, N (Ewers, Nancy)[1]; Mundhenk, K (Mundhenk, Kimberly)[1]; Leon, S (Leon, Seth)[2]; Kao, J (Kao, Jenny)[2]; Herman, J (Herman, Joan)[2]

Assessments developed and field tested for the mainstream student population may not be accessible for students with disabilities (SWDs) as a result of the impact of extraneous variables, including cognitive features, such as depth of knowledge required, grammatical and lexical complexity, lexical density, and textual/visual features. This study investigates the impact of these features on the performance outcomes of SWDs in the United States. Live test items from two different states with large numbers of SWDs were evaluated for their level of depth of knowledge features, linguistic complexity, two types of lexical features, and textual and visual characteristics. Results suggest that textual features have the greatest impact on the performance of students with different types of disabilities.

Assessment Data-Informed Guidance To Individualize Kindergarten Reading Instruction: Findings from a Cluster-Randomized Control Field Trial
Al Otaiba, S (Al Otaiba, Stephanie)[1]; Connor, CM (Connor, Carol M.)[1]; Folsom, JS (Folsom, Jessica S.)[1]; Greulich, L (Greulich, Luana)[1]; Meadows, J (Meadows, Jane)[1]; Li, Z (Li, Zhi)[2]

The purpose of this cluster-randomized control field trial was to examine whether kindergarten teachers could learn to differentiate classroom reading instruction using Individualized Student Instruction for Kindergarten (ISI-K) and to test the efficacy of differentiation on reading outcomes. The study involved 14 schools, 23 ISI-K (n = 305 students) and 21 contrast teachers (n = 251 students). Data sources included classroom observations, parent surveys, and student assessments of language, cognitive, and reading skills. Hierarchical multivariate linear modeling revealed that students in ISI-K classrooms outperformed contrast students on a latent measure of reading skills (ES = .52). Teachers in both conditions provided small-group instruction, but teachers in the ISI-K condition provided significantly more individualized instruction. Findings are discussed regarding professional development to differentiate core reading instruction and the challenge of using Response to Intervention approaches to address students' needs in the areas of reading.

The end of the reading age: grade and age effects in early schooling
Alexander, JRM (Alexander, JRM); Martin, F (Martin, F)

During the school years, psychological test norms may be indexed by age or by grade. A number of studies have shown that using age-based norms appears to produce biases associated with grade assignment. Cahan and Cohen [Child Dev. 60 (1989) 1239-1249] showed that the effect of one grade was over twice the effect of 1 year of age for most verbal cognitive ability subtests in Grades 4-6. A higher ratio might be expected for more curriculum-related areas such as reading tests. Analysis of a representative sample of 4257 Grade 1 and 2 children in Tasmanian government schools (which use relatively strict age assignment to grades) for three subtests of the Woodcock Reading Mastery Test-Revised (WRMTR): Word Identification, Word Attack, and Passage Comprehension, showed that the grade effect is about twice the age effect. This data shows that using age-based norms instead of grade-based norms for reading and other verbal ability tests may produce bias in

the early school years. Psychologists should thus be primarily concerned with children's educational history, as once children have entered school other developmental factors indexed by age have less influence on children's verbal performance.

What At-Risk Readers Need (EJ972166)

Author(s):	Allington, Richard L.	Pub Date:	2011-03-00
Source:	Educational Leadership, v68 n6 p40-45 Mar 2011		

Abstract:
Despite the fact that two of every three students in U.S. schools have reading proficiencies below the level needed to adequately do grade-level work, schools don't make a point of offering either high-quality professional development for kindergarten teachers nor expert tutorial instruction for at-risk kindergartners. This means that most schools will deliberately create a pool of students who will become their struggling readers. Schools typically focus on three approaches that don't work: using paraprofessionals to help struggling readers, using computer-based instructional programs, and using core reading programs. To effectively support young struggling readers, schools need to screen kindergarteners on day one and provide additional high-quality reading instruction to those in need of it, continue to offer supports in 1st grade, and engage students in high-success reading.

Teaching practice and the reading growth of first-grade English learners: Validation of an observation instrument
Baker, SK (Baker, Scott K.); Gersten, R (Gersten, Russell); Haager, D (Haager, Diane); Dingle, M (Dingle, Mary)
ELEMENTARY SCHOOL JOURNAL Volume: 107   Issue: 2   Pages: 199-219 DOI: 10.1086/510655   Published: NOV 2006
Validation of a classroom observation measure for use with English Learners (ELs) in grade I was the focus of this study Fourteen teachers were observed during reading and language arts instruction with an instrument used to generate ratings of instructional quality on a number of dimensions. In these classrooms we assessed the reading performance of all ELs, as well as a sample of native English speakers, at the beginning and end of the school year. Technical characteristics of the observation measure and the reading growth of ELs are described. The major finding was that observers were able to rate instructional practice in a way that predicted classroom reading growth. Correlations were on the order of .6 to .75, indicating a relatively strong relation between ratings of instructional practice and student reading growth. We interpret the relation between classroom instruction and ELs' reading growth using a framework of measurement validity developed by Messick that proposes an integrated conception of validity. We use the framework to discuss data analysis and interpretation and the potential implications of these interpretations for instruction and for professional development in early reading with ELs.

Response-To-Intervention in High-Risk Preschools: Critical Issues for Implementation
Ball, CR (Ball, Carrie R.)[1]; Trammell, BA (Trammell, Beth A.)[1]
PSYCHOLOGY IN THE SCHOOLS Volume: 48   Issue: 5   Pages: 502-512   DOI: 10.1002/pits.20572   Published: MAY 2011
This article summarizes the current knowledge of response-to-intervention (RTI) models in preschool settings, with an emphasis on evaluating the strengths and weaknesses of our current research base. Particular attention is given to the unique challenges of high-risk preschool settings. Presently, sufficient empirical support exists to begin establishing tiered

intervention systems and building teacher capacity. Lacking, however, are valid and reliable assessment tools and insufficiently trained personnel to support a data-based decision-model within high-risk preschools. We conclude that organizational development should focus on building teacher capacity, establishing high-quality classroom instruction, and planning for sustainable programs, with adoption of a full RTI service delivery model serving as a long-range aspirational goal.

The promise of alternative literacy assessments in the classroom: A review of empirical studies
Bauer, EB (Bauer, EB)
READING RESEARCH AND INSTRUCTION Volume: 38   Issue: 2   Pages: 153-168 Published: WIN 1999

Although alternative literacy assessments have been part of the educational system for many years, it is only recently that these forms of assessment have been associated with an assessment reform movement Central to this movement is the belief that these assessments will provide better opportunities to measure complex tasks in a contextualized setting, provide teachers with knowledge about students' literacy strengths and weaknesses that can be used to guide instruction, and encourage greater educational equity for all students. This article reviews classroom-based studies on alternative literacy assessment with respect to these purported benefits. Findings from the review suggest that alternative assessments in some cases tapped elements of the reading process that are more difficult to assess through traditional testing practices and created an impetus for some teachers to explore certain instructional issues. Although the findings on reading process and instruction are encouraging, there is little information on the impact of alternative assessments on culturally and linguistically diverse students.

An Examination of Predictive Bias for Second Grade Reading Outcomes from Measures of Early Literacy Skills in Kindergarten with Respect to English-Language Learners and Ethnic Subgroups
Betts, Joseph; Reschly, Amy; Pickart, Mary; Heistad, Dave; Sheran, Christina; Marston, Doug
School Psychology Quarterly vol. 23, no. 4 (December 2008), p. 553-570; 2008
The assessment of early literacy skills during the kindergarten year can provide useful information about student performance in prereading skills, which are predictors of later reading achievement. This study examined the use of fluency-based prompts of student phonemic awareness, alphabetic principle, and oral reading at the end of kindergarten for predicting later reading achievement at the end of second grade. Predictive validity and bias studies were undertaken with respect to English-language learners (ELLs) and four selected ethnic subgroups: European American (EA), African American (AA), Asian American (AsA), and Hispanic American (HA). Results indicated that the predictive validity of the early literacy measures was strong, and no evidence of predictive bias for ELL and non-ELL groups was found. However, evidence of a small amount of predictive bias was found between the EA and HA students with respect to intercept differences.

Construct and Predictive Validity Evidence for Curriculum-Based Measures of Early Literacy and Numeracy Skills in Kindergarten
Betts, Joseph; Pickart, Mary; Heistad, Dave
Journal of Psychoeducational Assessment vol. 27, no. 2 (2009), p. 83-95; 2009
The assessment of early literacy and numeracy skills can provide useful and important information in pursuance of the goal to increase student academic achievement. At present, there have been promising results using curriculum-based measurement (CBM) for evaluating early literacy and early numeracy. There has been little research investigating the use of both early literacy and numeracy CBM-type skills assessments in a comprehensive battery. This research extends previous research by investigating the internal validity of an

assessment battery of literacy and numeracy skills assessed at the end of kindergarten and external validity in the form of predictive validity for second-grade outcomes in reading and mathematics. Results suggest that correlated factors representing early literacy and numeracy skills are being measured. Evidence of convergent and incremental predictive validity with respect to later reading and mathematics outcomes was strong, but discriminant validity was not substantiated. (Contains 3 tables and 2 figures.)

Betts, J.a b , Pickart, M.c , Heistad, D.c
Investigating Early Literacy and Numeracy: Exploring the Utility of the Bifactor Model
Center for Cultural Diversity and Minority Education, Madison, WI, United States; Minneapolis Public Schools, Minneapolis, MN, United States
ABSTRACT: Previous research has provided evidence for the utility of the Minneapolis Kindergarten Assessment (MKA), which is a measure of early literacy and numeracy skills. The present research was undertaken to replicate previous factorial results and evaluate the relative strength of an alternative parameterization of the measurement model, the bifactor model, which was posited to correct for anomalies found in the research literature. In addition, predictive validity evidence was ascertained to evaluate the extent to which two different factorial structures differed when making predictions about later reading and mathematics outcomes. Results suggested the bifactor model provided a useful measurement model conceptualization and also provided a strong predictive model for later reading and mathematics.

Early identification of reading difficulties using heterogeneous developmental trajectories
Boscardin, CK (Boscardin, Christy Kim)[1,2]; Muthen, B (Muthen, Bengt)[1,3]; Francis, DJ (Francis, David J.)[4,5]; Baker, EL (Baker, Eva L.)[2,1]
Serious conceptual and procedural problems associated with current diagnostic methods call for alternative approaches to assessing and diagnosing students with reading problems. This study presents a new analytic model to improve the classification and prediction of children's reading development. Growth mixture modeling was used to identify the presence of 10 different heterogeneous developmental patterns. In all, 411 children in kindergarten through Grade 2 from 3 elementary schools in Texas were administered measures of phonological awareness, word recognition, and rapid naming skills 4 times a year. The mean ages were 5.8 years (SD = 0.35) for the kindergartners, 6.9 years (SD = 0.39) for Grade 1, and 8.0 years (SD = 0.43) for Grade 2; the percentage of boys was 50%. The results indicate that precursor reading skills such as phonological awareness and rapid naming are highly predictive of word reading (word recognition) and that developmental profiles formed in kindergarten are directly associated with development in Grades 1 and 2. Students identified as having reading-related difficulties in kindergarten exhibited slower development of word recognition skills in subsequent years of the study.

Development of academic skills from preschool through second grade: Family and classroom predictors of developmental trajectories
Burchinal, MR (Burchinal, MR); Peisner-Feinberg, E (Peisner-Feinberg, E); Pianta, R (Pianta, R); Howes, C (Howes, C)
Children's experiences with their parents and teachers were related to the acquisition of academic skills from preschool through second grade. Individual and group growth curves

were estimated, and individual patterns of change were predicted from selected demographic, family, and classroom characteristics to identify multiple pathways to early academic competence. Standardized assessments of language and academic skills and parent and teacher surveys were collected on 511 children beginning in the second-to-last year of child care through the third year of elementary school. As expected, children tended to show better academic skills across time if their parents had more education and reported more progressive parenting beliefs and practices. Statistical interactions between family background and teacher-child relationships indicated that a closer relationship with the teacher was positively related to language skills for African-American children and to reading competence for children whose parents reported more authoritarian attitudes. These results provide further evidence that social processes in classrooms are important for academic competence for children considered at risk for academic problems.

Predictive Validity of Early Literacy Indicators From the Middle of Kindergarten to Second Grade
Burke, Mack D; Hagan-Burke, Shanna; Kwok, Oiman; Parker, Richard
The Journal of Special Education vol. 42, no. 4 (Feb 2009), p. 209-226
Research has emphasized the importance of phonological awareness, phonemic decoding, and automaticity in reading development. Special and general education teachers need valid, efficient, and effective early literacy indicators for schoolwide screening and monitoring that adequately predict reading outcomes. The purpose of this study was to examine the interrelationships and predictiveness of kindergarten early literacy indicators from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) within the context of a path analysis. The results support the validity of kindergarten DIBELS in predicting ever more complex reading skills in a developmental progression from the middle of kindergarten to second grade.

A Structural Equation Model Using Fluency-Based Early Literacy Measures to Predict Emerging Reading Ability in Kindergarten
Burke, MD (Burke, Mack D.)[1]; Hagan-Burke, S (Hagan-Burke, Shanna)[1]; Zou, YY (Zou, Yuanyuan)[2]; Kwok, O (Kwok, Oiman)[3]
REMEDIAL AND SPECIAL EDUCATION Volume: 31 Issue: 5 Pages: 385-399 DOI: 10.1177/0741932509355949 Published: SEP-OCT 2010
The reauthorization of the Individuals with Disabilities Education Act has initiated changes that are affecting early literacy assessment, and it has prompted the growing use of measures that incorporate phonological and alphabetic fluency. However, the question of how phonological and alphabetic fluency can inhibit (or promote) reading acquisition in kindergarten has received sparse attention. This study investigated phonological and alphabetic fluency as a predictor of emerging reading ability in kindergarten. Results indicated that a three-construct structural equation model could be developed. Moreover, an alphabetic construct, as formed from sublexical fluency measures administered at the middle of kindergarten, fully mediated the relationship between phonological fluency and end-of-year emerging reading ability. Implications are discussed in the context of reading acquisition.

Predicting Reading Success in a Multilevel Schoolwide Reading Model
Chard, David J; Stoolmiller, Mike; Harn, Beth A; Wanzek, Jeanne; Vaughn, Sharon; Linan-Thompson, Sylvia; Kame'enui, Edward J
Journal of Learning Disabilities (Austin) vol. 41, no. 2 (Mar 2008), p. 174-188
Despite recent research findings that implicate a long list of student variables that predict reading success or failure, these predictor variables have not been considered in the context of contemporary models of multitiered schoolwide reading intervention. This longitudinal, retrospective study follows 668 kindergarten and first-grade students identified as at risk for later reading difficulties through third grade. Key predictor variables were

examined to determine their validity for predicting initial status and growth on oral reading fluency, third-grade oral reading fluency, and third-grade performance on a standardized test of reading. Results are provided in light of the instructional model provided. Implications for instruction and assessment are discussed.

Tracing Student Responsiveness to Intervention with Early Literacy Skills Indicators: Do They Reflect Growth toward Text Reading Outcomes? (EJ969750)

Author(s):	Clemens, Nathan H.; Hilt-Panahon, Alexandra; Shapiro, Edward S.; Yoon, Myeongsun	Pub Date:	2012-00-00
Source:	Reading Psychology, v33 n1-2 p47-77 2012		

Abstract:
This study investigated four widely-used early literacy skills indicators in reflecting growth toward first-grade text reading skills. Examining the progress of 101 students across kindergarten and first grade, Letter Naming Fluency (LNF) and Nonsense Word Fluency (NWF) were more accurate than Initial Sounds Fluency and Phoneme Segmentation Fluency in discriminating between students grouped according to successful or unsuccessful first-grade reading outcomes. LNF and NWF slope also discriminated between groups, but graphed observed scores suggested potential problems in identifying students with persistently low achievement. Results suggest the need for continued refinement of early literacy skills measures for instructional decision-making.

Selecting At-Risk First-Grade Readers for Early Intervention: Eliminating False Positives and Exploring the Promise of a Two-Stage Gated Screening Process
Compton, DL (Compton, Donald L.)[1]; Fuchs, D (Fuchs, Douglas)[1]; Fuchs, LS (Fuchs, Lynn S.)[1]; Bouton, B (Bouton, Bobette)[1]; Gilbert, JK (Gilbert, Jennifer K.)[1]; Barquero, LA (Barquero, Laura A.)[1]; Cho, E (Cho, Eunsoo)[1]; Crouch, RC (Crouch, Robert C.)[1]
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 102   Issue: 2   Pages: 327-340 DOI: 10.1037/a0018448   Published: MAY 2010
The purposes of this study were (a) to identify measures that when added to a base 1st-grade screening battery help eliminate false positives and (b) to investigate gains in efficiency associated with a 2-stage gated screening procedure. We tested 355 children in the fall of 1st grade and assessed for reading difficulty at the end of 2nd grade. The base screening model included measures of phonemic awareness, rapid naming skill, oral vocabulary, and initial word identification fluency (WIF). Short-term WIF progress monitoring (intercept and slope), dynamic assessment, running records, and oral reading fluency were each considered as an additional screening measure in contrasting models. Results indicated that the addition of WIF progress monitoring and dynamic assessment, but not running records or oral reading fluency, significantly decreased false positives. The 2-stage gated screening process using phonemic decoding efficiency in the 1st stage significantly reduced the number of children requiring the full screening battery.

Dynamic and Static Assessment of Phonological Awareness in Preschool: A Behavior-Genetic Study
Coventry, WL (Coventry, William L.)[1]; Byrne, B (Byrne, Brian); Olson, RK (Olson, Richard K.)[2]; Corley, R (Corley, Robin)[2]; Samuelsson, S (Samuelsson, Stefan)[3,4]
JOURNAL OF LEARNING DISABILITIES Volume: 44   Issue: 4   Pages: 322-329   DOI: 10.1177/0022219411407862   Published: JUL-AUG 2011

The genetic and environmental overlap between static and dynamic measures of preschool phonological awareness (PA) and their relation to preschool letter knowledge (LK) and kindergarten reading were examined using monozygotic and dizygotic twin children (maximum N = 1,988). The static tests were those typically used to assess a child's current level of PA such as blending and elision, and the dynamic test included instruction in phoneme identity to assess the child's ability to respond to this instruction. Both forms were influenced by genes and by shared and nonshared environment. The static and dynamic versions were influenced by the same genes, and part of the total genetic influence was shared with LK. They were subject to both overlapping and independent shared environment influences, with the component in common also affecting LK. Nonshared environment influences were mostly independent. Scores from dynamic assessment added only minimally to variance explained in kindergarten reading after LK and static assessment had been factored in. Although one of the genetic factors that influenced both forms of PA also affected kindergarten reading, it was only the one shared with LK. The authors conclude that dynamic assessment of PA in preschool offers little advantage over the more commonly used static forms, especially if LK scores are available, although they acknowledge its potential in cases of preschool educational disadvantage.

Promoting beginning reading success through meaningful assessment of early literacy skills
Coyne, MD (Coyne, MD); Harn, BA (Harn, BA)
Recent scientific advances in early literacy assessment have provided schools with access to critical information about students' foundational beginning reading skills. In this article, we describe how assessment of early literacy skills can help school psychologists promote beginning reading success for all children. First, we identify key skills in early literacy and describe a comprehensive assessment system, Dynamic Indicators of Basic Early Literacy Skills (DIBELS), developed to assess essential beginning reading skills. Next, we present a conceptual framework for thinking about early literacy assessment across four distinct purposes: (a) screening, (b) diagnosis, (c) progress monitoring, and (d) student outcomes. Finally, we provide school-based examples that illustrate how DIBELS can be used to assess students' early literacy skills across each of these four purposes and facilitate informed and ongoing instructional decision making.

Are They Ready? An Investigation of the Reading Readiness Deficiencies of Kindergarten Students
Daley, Ena M.
2010
The primary purpose of the study was to investigate the extent to which students who entered kindergarten are deficient in reading readiness skills; to determine the outcome of parental involvement in children's early education; and to gain a clear, holistic understanding of the research problem. The research methodology selected for this study was a mixed-method approach involving qualitative and quantitative techniques. The design was used to investigate valid characteristics of reading readiness deficiencies of 114 students who entered kindergarten, and analyzed state- and district-provided data from the Florida Assessments for Instruction in Reading (FAIR) assessment and Early Childhood Observation System (ECHOS) observation. The study also involved eight kindergarten teachers and 69 parents who volunteered and completed questionnaires regarding perspectives about reading readiness deficiencies. The study investigated the factors that contribute to the reading readiness deficiencies of kindergarten students. The factors examined include preschool attendance, gender, race, parent's education, and type of parental supports. The results indicate that preschool experiences and parental involvement significantly contribute to kindergarteners' reading readiness development. Kindergarteners who lack basic academic skills are ill-equipped for formal learning experiences and impede

kindergarten teachers' ability to begin a program of instruction. The study recommends that school board policymakers should adjust the kindergarten curriculum to meet the reading readiness needs of students entering kindergarten. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Measures of early academic skills: Reliability and validity with a first grade sample
Daly, EJ (Daly, EJ); Wright, JA (Wright, JA); Kelly, SQ (Kelly, SQ); Martens, BK (Martens, BK)
SCHOOL PSYCHOLOGY QUARTERLY Volume: 12   Issue: 3   Pages: 268-280   DOI: 10.1037/h0088962   Published: FAL 1997
This study investigated the reliability- (interscorer and test-retest) and criterion-related validity (concurrent and predictive) of 11 curriculum-based measures of early academic skills with a sample of first-grade students. Some measures required production-type responses. Other measures required selection-type responses. The measures involved letters (sounds, names, copying), numbers (names, counting in sequence), colors, and shapes. Subjects were 30 first-grade students from an urban parochial school. Test-Retest reliability was assessed with alternate forms of the measures over a two-week interval. Concurrent validity was assessed with a norm-referenced achievement test (the Woodcock-Johnson Revised). Predictive validity was assessed by measuring oral reading fluency in passages and on word lists four months after the initial assessment. Results suggested that some measures displayed better reliability and validity than others. The practical utility of these measures in light of their technical characteristics and the need for further construct validity data are discussed.

Can Preschool Education Affect Children's Achievement in Primary-School
DANIELS, S (DANIELS, S)
OXFORD REVIEW OF EDUCATION Volume: 21   Issue: 2   Pages: 163-178   DOI: 10.1080/0305498950210203   Published: JUN 1995
The evidence presented in this paper suggests that exposure to pre-school experience has a significantly positive effect on the outcomes of the first two runs of the National Curriculum assessment results for seven year-olds. A hierarchical linear model (using ML3E software) enabled the evidence of this pre-school effect to be identified whilst taking into account the nested structure of the children within the class. The effect is over and above the positive advantage gained by age and social group and is consistently significant in all four subjects of reading, writing, number and science. Both nursery and playgroup experience have a positive effect on children's achievements when compared to non-attendance. The children with nursery experience came predominantly from the lower socio-economic groups while the children attending play-group tended to be from the higher social groups. This paper suggests that it would be unwise to compare the results from children having nursery experience and those having playgroup experience since it is unreasonable to expect the educational opportunities for children in the lower socio-economic groups in a poorly resourced playgroup to be equivalent to those available in a better resourced nursery class.

Chicken or Egg? Untangling the Relationship between Orthographic Processing Skill and Reading Accuracy (EJ946484)

Author(s):	Deacon, S. Helene; Benere, Jenna; Castles, Anne	Pub Date:	2012-01-00
Source:	Cognition, v122 n1 p110-117 Jan 2012		

Abstract:
There is increasing evidence of a relationship between orthographic processing skill, or the ability to form, store and access word representations, and reading ability. Empirical research to date has not, however, clarified the direction of this relationship. We examined this question in a three-year longitudinal study of children from Grades 1 to 3. We included standard measures of orthographic processing skill, at both the lexical and sublexical level, and word reading accuracy, as well as controls of vocabulary, non-verbal reasoning, and phonological awareness. In all analyses, word reading predicted progress in acquiring orthographic processing skill, regardless of grade level or orthographic processing measure. In contrast, orthographic processing skill did not predict progress in word reading. Our results suggest that, between Grades 1 and 3, children acquire orthographic processing skill through their reading and that this ability, as characterized by the most common tasks used to date, does not play an independent role in supporting reading acquisition. (Contains 4 tables and 2 figures.)

Validity reliability, and utility of the observation survey of early literacy achievement
Denton, CA (Denton, CA); Ciancio, DJ (Ciancio, DJ); Fletcher, JM (Fletcher, JM)
This study evaluated the validity, reliability, and utility of five of the six subtests of Clay's (2002) Observation Survey of Early Literacy Achievement (OS), including Letter Identification, Word Reading, Writing Vocabulary, Hearing and Recording Sounds in Words, and Text Reading. In addition to a review of studies providing assessment of the reliability and validity of the OS, we analyzed (a) the concurrent validity of the OS subtests relative to other instruments with known psychometric properties, (b) their validity and accuracy as predictors of reading development in grade 1, and (c) interadministrator reliability for the Text Reading and Writing Vocabulary subtests. The score distributions of most of the OS subtests indicated inadequate floors and ceilings, suggesting that when the OS subtests are scored as recommended in the manual, they are not suitable for program evaluation. Analyses of predictive validity indicated that decisions based on the attainment of established benchmarks in OS Word Identification, Text Reading, and Writing Vocabulary would be valid for early screening purposes and to evaluate student outcomes, but more work needs to be done in setting benchmarks for these subtests. In addition to this evidence for predictive validity, there was evidence for concurrent validity of the OS. Interassessor reliability was high for both the Text Reading and Writing Vocabulary subtests in our sample. Our review of the characteristics and administration procedures of each subtest suggests cautions regarding the utility of some of the measures for diagnostic assessment and progress monitoring. Overall, with some limitations, the OS can be validly implemented to assess components of early reading development.

Genetic and Environmental Influences on Inattention, Hyperactivity-Impulsivity, and Reading: Kindergarten to Grade 2
Ebejer, JL (Ebejer, Jane L.)[1]; Coventry, WL (Coventry, William L.); Byrne, B (Byrne, Brian); Willcutt, EG (Willcutt, Erik G.)[2]; Olson, RK (Olson, Richard K.)[2]; Corley, R (Corley, Robin)[2]; Samuelsson, S (Samuelsson, Stefan)[3,4]
Twin children from Australia, Scandinavia, and the United States were assessed for inattention, hyperactivity-impulsivity, and reading across the first 3 school years. Univariate behavior-genetic analyses indicated substantial heritability for all three variables in all years. Longitudinal analyses showed one genetic source operating across the time span and a second entering in the second school year for each variable, though possibly not reliable for

inattention. Other analyses confirmed previous findings of pleiotropy (shared genes) between inattention and reading and showed that this genetic overlap is in place from kindergarten onwards and is restricted to one of the genetic sources that affect reading and inattention. The results extend previous conclusions about the developmental trajectories of inattention, hyperactivity-impulsivity, and reading and their relationships. Limitations of this study are discussed, as are educational implications.

The Utility of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) in Predicting Reading Achievement (ED522145)

Author(s):	Echols, Julie M. Young	Pub Date:	2010-00-00
Source:	ProQuest LLC, Ed.D. Dissertation, Seattle Pacific University	Pub Type(s):	Dissertations/Theses - Doctoral Dissertations

Abstract:
Reading proficiency is the goal of many local and national reading initiatives. A key component of these initiatives is accurate and reliable reading assessment. In this high-stakes testing arena, the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) has emerged as a preferred measure for identification of students at risk for reading failure. The purpose of this doctoral dissertation was to determine the utility of the DIBELS in predicting future reading achievement, as measured by the Washington Assessment of Student Learning and the Measures of Academic Progress. This is a non-experimental research study using ex post facto data. The research design was both correlational, and prediction (Gall, Gall, & Borg, 2007). The target population was primary students in grades 1-3. The study was based on longitudinal data collected in years 2006, 2007, and 2008. Data were derived from one urban school district in Washington State. The results of the research study demonstrated DIBELS measures of Oral Reading Fluency and Retell Fluency were moderate to strong predictors of reading achievement on the third grade reading WASL and MAP. This research study also indicated that the DIBELS assessment system was an unreliable measure for assessing reading achievement of certain student groups. In particular, this study determined the DIBELS mispredicted reading achievement on the WASL for students identified as English Language Learners. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

A reliability and validity study of the dynamic indicators of basic early literacy skills-modified
Elliott, J (Elliott, J); Lee, SW (Lee, SW); Tollefson, N (Tollefson, N)
SCHOOL PSYCHOLOGY REVIEW Volume: 30 Issue: 1 Pages: 33-49 Published: 2001
This study examined the psychometric properties of a set of preliteracy measures modified from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) with a sample of 75 kindergarten students. The modified battery (called DIBELS-M) includes measures of Letter Naming Fluency, Sound Naming Fluency, Initial Phoneme Ability, and Phonemic Segmentation Ability. These measures were assessed through repeated administrations in 2-week intervals at the end of the kindergarten year. Interrater reliability estimates and coefficients of stability and equivalence for three of the measures ranged from .80 to the mid .90s with about one-half of the coefficients above .90. Correlations between DIBELSM scores and criterion measures of phonological awareness, standardized achievement measures, and teacher ratings of achievement yielded concurrent validity coefficients ranging from .60 to .70. Hierarchical regression analysis showed that the four DIBELS-M

measures accounted for 73% of the variance in scores on the Skills Cluster of the Woodcock-Johnson Psychoeducational Battery-Revised (WJ-R). The results of the analysis support the use of the DIBELS-M measures for identification of kindergarten students who are at-risk for reading failure and for progress monitoring. The contributions of the study, including psychometric analysis of the DIBELS-M with a new sample and formation of composite scores, are discussed in relation to the extant literature.

Specific precursors of decoding speed, reading comprehension, and spelling: Evidence from two longitudinal studies from kindergarten to grade 4

Ennemoser, M (Ennemoser, Marco)[1]; Marx, P (Marx, Peter)[2]; Weber, J (Weber, Jutta)[2]; Schneider, W (Schneider, Wolfgang)[2]
This study investigated specific effects of various precursors of school achievement assessed during the last year of kindergarten on subsequent literacy acquisition. In particular, the assumption was tested that the importance of kindergarten predictor variables for explaining individual differences in reading and spelling may differ as a function of the stage of literacy development. Data from two longitudinal studies were re-analysed to test this assumption. Data collection in both studies started in the late period of kindergarten and lasted until the end of the fourth grade, including 165 and 175 children in Studies 1 and 2, respectively. Results for both studies indicated that different predictor variables proved significant for explaining differences in reading speed, reading comprehension, and spelling. In accord with the basic hypothesis, linguistic competencies assessed in kindergarten did not predict early literacy development but contributed significantly to the prediction of reading comprehension and (at least partially) spelling at later stages of the schooling process.

Fitzpatrick, M.D.a , Grissmer, D.b , Hastedt, S.c
What a difference a day makes: Estimating daily learning gains during kindergarten and first grade using a natural experiment
Stanford Institute for Economic Policy Research (SIEPR), Stanford University, United States; CASTL, University of Virginia, United States; University of Virginia, United States
Knowing whether time spent in formal schooling increases student achievement, and by how much, is important for policymakers interested in determining efficient use of resources. Using the ECLS-K, we exploit quasi-randomness in the timing of assessment dates to examine this question. Conservative estimates suggest a year of school results in gains of about one standard deviation above normal developmental gains in both reading and math test scores. The results are statistically significant and extremely robust to specification choice, supporting quasi-randomness of test dates. Estimates of skill accumulation due to formal schooling do not vary based on socioeconomic characteristics.

Contextual effects on predicting risk for reading difficulties in first and second grade
Foorman, BR (Foorman, Barbara R.)[1]; York, M (York, Mary)[2]; Santi, KL (Santi, Kristi L.)[3]; Francis, D (Francis, David)[2]
This study utilized early reading assessment data from a randomized trial of 210 urban and rural schools in Texas to examine contextual effects on risk prediction in first and second grade. The primary objective was to examine the roles of (a) individual differences, (b) the grade 1 classroom, and (c) the pairing of first and second grade teachers in determining

grade 2 outcomes in word reading and fluency. A second objective was to investigate whether the administration format of the assessment (paper, paper plus desktop, handheld plus desktop) or the level of teacher support (web mentoring, no mentoring) moderated the prediction. These moderator variables proved not to be significant. Subsequent analyses found that a combination of student pretest and mean of pretest classroom was a better predictor than student pretest alone. Additionally, the effect of student scores varied by teacher-pair. On average, intraclass correlations (ICCs) ranged from 6% to 17%. Differences in ICCs at the classroom level were much greater than at the school level, and differences in urban schools were twice that of rural schools.

Foster, W.A.a c , Miller, M.b
Development of the literacy achievement gap: A longitudinal study of kindergarten through third grade
(2007) Language, Speech, and Hearing Services in Schools, 38 (3), pp. 173-181.
http://www.scopus.com/inward/record.url?eid=2-s2.0-34547772132&partnerID=40&md5=bbe46c77713c7b68a175c1c83d89316b
Guilford County Schools, Greensboro, NC, United States; Alamance-Burlington Schools, Burlington, NC, United States; Exceptional Children Services, Guilford County Schools, Greensboro, NC 27401, United States
Purpose: The major goal of this study was to specify the developmental trajectories for phonics and early text comprehension skills of children from kindergarten through third grade. Method: Data from the Early Childhood Longitudinal Study (N=12,261) were used in this study. The participants were divided into 3 school readiness groups based on an assessment of literacy skill development at the time of entrance into kindergarten. The different groups were tracked on phonics and text comprehension development through the third grade. Results: Students in the average and high literacy readiness groups achieved high scores in decoding (phonics) by the end of the first grade. Students in the low readiness group did not match these scores until the third grade. Although the phonics gap was essentially closed in the third grade, a second, very significant text comprehension gap was exposed. The 3 readiness groups were analyzed to assess the relative contributions of parent education, income, and kindergarten literacy score to third-grade literacy achievement. Clinical Implications: The results of this study stress the need for speech-language pathologists to assess emergent literacy skills in their speech and language clients and to include appropriate literacy goals in the treatment regimen as a means for reducing the potential need for identification as learning disabled in reading in the later years of elementary school.

The Construct and Predictive Validity of a Dynamic Assessment of Young Children Learning to Read: Implications for RTI Frameworks
Fuchs, D (Fuchs, Douglas)[1]; Compton, DL (Compton, Donald L.)[1]; Fuchs, LS (Fuchs, Lynn S.)[1]; Bouton, B (Bouton, Bobette); Caffrey, E (Caffrey, Erin)[2]
JOURNAL OF LEARNING DISABILITIES Volume: 44   Issue: 4   Pages: 339-347   DOI: 10.1177/0022219411407864   Published: JUL-AUG 2011
The purpose of this study was to examine the construct and predictive validity of a dynamic assessment (DA) of decoding learning. Students (N = 318) were assessed in the fall of first grade on an array of instruments that were given in hopes of forecasting responsiveness to reading instruction. These instruments included DA as well as one-point-in-time (static) measures of early alphabetic knowledge, rapid automatized naming (RAN), phonemic awareness, oral vocabulary, listening comprehension, attentive behavior, and hyperactive or impulsive behavior. An IQ test was administered in spring of second grade. Measures of reading outcomes administered in spring of first grade were accuracy and fluency of word identification skills and reading comprehension. Factor analysis using principal axis factor extraction indicated that DA loaded on a first factor that also included language abilities and IQ, which the authors refer to as the "language, IQ, and DA" factor. It was relatively distinct

from two additional factors: (a) "speeded alphabetic knowledge and RAN" and (b) "task-oriented behavior." A three-level (children nested within classroom; classrooms nested within school) random intercept model with fixed effects predictors suggested that DA differed from word attack in predicting future reading skill and that DA was a significant predictor of responsiveness to instruction, contributing unique variance to end-of-first-grade word identification and reading comprehension beyond that explained by other well-established predictors of reading development.

First-Grade Cognitive Abilities as Long-Term Predictors of Reading Comprehension and Disability Status

Fuchs, D (Fuchs, Douglas)[1]; Compton, DL (Compton, Donald L.)[1]; Fuchs, LS (Fuchs, Lynn S.)[1]; Bryant, VJ (Bryant, V. Joan)[1]; Hamlett, CL (Hamlett, Carol L.)[1]; Lambert, W (Lambert, Warren)[1]
In a sample of 195 first graders selected for poor reading performance, the authors explored four cognitive predictors of later reading comprehension and reading disability (RD) status. In fall of first grade, the authors measured the children's phonological processing, rapid automatized naming (RAN), oral language comprehension, and nonverbal reasoning. Throughout first grade, they also modeled the students' reading progress by means of weekly Word Identification Fluency (WIF) tests to derive December and May intercepts. The authors assessed their reading comprehension in the spring of Grades 1-5. With the four cognitive variables and the WIF December intercept as predictors, 50.3% of the variance in fifth-grade reading comprehension was explained: 52.1% of this 50.3% was unique to the cognitive variables, 13.1% to the WIF December intercept, and 34.8% was shared. All five predictors were statistically significant. The same four cognitive variables with the May (rather than December) WIF intercept produced a model that explained 62.1% of the variance. Of this amount, the cognitive variables and May WIF intercept accounted for 34.5% and 27.7%, respectively; they shared 37.8%. All predictors in this model were statistically significant except RAN. Logistic regression analyses indicated that the accuracy with which the cognitive variables predicted end-of-fifth-grade RD status was 73.9%. The May WIF intercept contributed reliably to this prediction; the December WIF intercept did not. Results are discussed in terms of a role for cognitive abilities in identifying, classifying, and instructing students with severe reading problems.

Preventive Screening For Early Readers: Predictive Validity Of The Dynamic Indicators Of Basic Early Literacy Skills (DIBELS)

Goffreda, CT (Goffreda, Catherine T.)[1]; Diperna, JC (Diperna, James Clyde); Pedersen, JA (Pedersen, Jason A.)[2]
Current empirical evidence indicates poor learning trajectories for students with early literacy skill deficits. As such, reliable and valid detection of at-risk students through regular screening and progress monitoring is imperative. This study investigated the predictive validity of scores on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Logistic regression analyses were used to test the utility of the DIBELS first grade indicators for predicting reading proficiency on TerraNova California Achievement Test (CAT) Assessment and Pennsylvania System of School Assessment (PSSA) in second and third grade, respectively. Results suggest that students' first grade Oral Reading Fluency (ORF) DIBELS risk category scores were the only significant predictor of future TerraNova and PSSA reading Proficiency. Although the Current data present encouraging results for the predictive validity of ORF as a screening tool for early readers, further investigations of the utility of the remaining indicators (Letter Naming Fluency, Nonsense Word Fluency, and Phonemic Segmentation Fluency) are warranted.

Good III, R.H.a b , Simmons, D.C.c , Smith, S.B.c
Effective academic interventions in the United States: Evaluating and enhancing the acquisition of early reading skills
(1998) School Psychology Review, 27 (1), pp. 45-56.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0032395854&partnerID=40&md5=f2d92e95f269f2fc1b5e5007e1382cd4
School Psychology Program, DABCS College of Education, 5208 University of Oregon, Eugene, OR 97403-5208, United States; Department of School Psychology, University of Oregon, Eugene, OR, United States

The alignment of assessment, intervention, and meaningful student outcomes is arguably one the most exciting developments in school psychology. This linkage is specially apparent in the areas of early literacy where the convergence of three areas of research and development form a dynamic process of information and feedback to enhance the effectiveness of interventions in preventing and remediating reading problems for children in early elementary grades. In this article, we develop the rationale for early and intensive literacy intervention, review the major implications of the converging evidence in early literacy and reading acquisition, and propose mechanisms to enhance early literacy development through the strategic and timely linkage of assessment and intervention. The major areas of convergence from research regarding what to teach and how to teach it are presented. The contributions and role of assessment information in developing and providing effective beginning reading and early literacy interventions are described.

The Literacy Environment of Preschool Classrooms: Contributions to Children's Emergent Literacy Growth (EJ972812)

| Author(s): | Guo, Ying; Justice, Laura M.; Kaderavek, Joan N.; McGinty, Anita | Pub Date: | 2012-08-00 |
| Source: | Journal of Research in Reading, v35 n3 p308-327 Aug 2012 | | |

Abstract:
This study examined the relations among features of the classroom physical literacy environment (book materials, literacy area and writing materials) and psychological literacy environment (instructional support), and preschool children's gains in two areas of emergent literacy over an academic year. Results showed that features of the physical literacy environment had little direct association with children's gains in emergent literacy, with the exception of quality of literacy area being a positive and significant predictor of children's gains in alphabet knowledge (but not name-writing ability). Rather, the physical and psychological literacy environment seem to be interdependent, particularly with respect to provision of writing materials. Specifically, presence of writing materials is positively and significantly associated with children's growth in alphabet knowledge and name-writing ability only within the context of high-quality, instructionally supportive classrooms. Educational implications are discussed.

The Long-Term Effects On High-School Seniors Of Learning To Read In Kindergarten
Hanson, RA (Hanson, Ra); Farrell, D (Farrell, D)
READING RESEARCH QUARTERLY Volume: 30   Issue: 4   Pages: 908-933   DOI: 10.2307/748204   Published: OCT-DEC 1995
Follow-up study assessed the educational history and current reading proficiencies of a large number of high school seniors (N = 3,959) from 24 school districts in 10 U.S. states in

1986. The purpose was to examine the effects, if any, of receiving formal reading instruction in kindergarten. Over one third of these students attended elementary schools that implemented a carefully developed beginning reading program in their kindergarten classes in 1973. Although the study included kindergarten students from all backgrounds, those from at-risk backgrounds were overrepresented. Three types of information were combined for each student to create the database for this study: (a) the amount of kindergarten reading instruction received; (b) family background and educational history variables assessed as a high school senior; and (c) reading interests and competencies assessed as a high school senior. A series of comparative analyses is presented that examined the relationship between kindergarten reading instruction and various effects variables describing the students' subsequent schooling experiences and reading competencies as high school seniors. Results showed that clear, consistent, and positive differences were associated with receiving kindergarten reading instruction.

From learning to read to reading to learn: Substantial and stable genetic influence
Harlaar, N (Harlaar, Nicole); Dale, PS (Dale, Philip S.); Plomin, R (Plomin, Robert)
CHILD DEVELOPMENT Volume: 78 Issue: 1 Pages: 116-131 DOI: 10.1111/j.1467-8624.2007.00988.x Published: JAN-FEB 2007
Little is known about the underlying causes and developmental patterns of stability and change in early reading abilities. In a longitudinal study of twins (n=4,291 pairs), individual differences in reading achievement assessed by teachers using U.K. National Curriculum (NC) criteria showed substantial heritabilities at ages 7, 9, and 10 years (.57-.67) and modest shared environmental influences (.10-.17). Stability in NC scores was primarily mediated genetically. There was also evidence for age-specific genetic influences at each age. Genetic influences on reading are substantial and stable during the elementary school years despite the shift from "learning to read" to "reading to learn."

Gender and language issues in assessing early literacy: Group differences in children's performance on the test of early reading ability
Harper, SN (Harper, Sarah N.)[1]; Pelletier, JP (Pelletier, Janette P.)
JOURNAL OF PSYCHOEDUCATIONAL ASSESSMENT Volume: 26 Issue: 2 Pages: 185-194 DOI: 10.1177/0734282908314105 Published: JUN 2008
The study investigated gender and language group differences in children's performance on two versions of the Test of Early Reading Ability (TERA-2 and TERA-3). Two groups of children consisting of girls and boys and English first language (L1) and English language learners (ELL) participated in the study. Children in Group 1 completed the TERA-2, in which standard procedures involve obtaining a total score of children's early reading ability. Alternatively, children in Group 2 were administered the TERA-3, which yields measures of children's ability on three individual subtests (alphabet, conventions, and meaning). Results showed that gender and language group differences on the TERA-2 were not evident. However, L I children outperformed ELL children on the meaning subtest of the TERA-3, while showing no differences on either alphabet or conventions. The findings speak to the importance of measuring individual components of early reading to assess children's emergent literacy.

Conventional and Piecewise Growth Modeling Techniques: Applications and Implications for Investigating Head Start Children's Early Literacy Learning (EJ939574)			
Author(s):	Hindman, Annemarie H.; Cromley, Jennifer G.; Skibbe, Lori E.; Miller, Alison L.	Pub Date:	2011-06-00
Source:	Evaluation Review, v35 n3		

Abstract:
This article reviews the mechanics of conventional and piecewise growth models to demonstrate the unique affordances of each technique for examining the nature and predictors of children's early literacy learning during the transition from preschool through first grade. Using the nationally representative Family and Child Experiences Survey (FACES) data set, 1997 cohort, the authors show how piecewise models revealed discrete contributions of child, family, and classroom experiences to children's literacy skills within particular years, whereas conventional models, which considered the whole 3-year trajectory of change as a single outcome, revealed fewer of these nuanced contributions.

Predicting North Carolina Third Grade End-of-Grade Test of Reading Comprehension Scores from First, Second, and Third Grade Variables (ED534060)

Abstract:
A significant body of research exists on the development of early literacy skills and their relationship to the development of literacy as a whole. Phonological awareness, orthographic processing, rapid automatized naming, phonological memory, and receptive vocabulary have all been shown to be predictive of early reading outcome measures. What is unknown, however, is whether or not these variables are predictive of the North Carolina third grade End of Grade Test of Reading Comprehension, a major outcome measure used in North Carolina to determine student, teacher, school, and district academic performance. This study addressed the following research questions: (1) Do the variables identified through a review of the literature as being predictors of reading achievement in first, second, and third grade contribute to scores on the reading EOG? (2) Does growth on measures of these variables, identified through a review of the literature as being predictors of reading achievement in first, second, and third grade contribute to scores on the reading EOG? Linear regressions were conducted on data consisting of 111 children. After controlling for age, IQ, and inherent characteristics of the data set, five predictor variables in grades one, two, and three were found to be significantly predictive of the outcome measure. A significant portion of variance was accounted for by receptive vocabulary at time point one; phonological awareness, RAN and receptive vocabulary at time point two; and orthographic processing and RAN at time point three. Further examination indicated phonological awareness and RAN were most predictive and time point two and orthographic processing was most predictive at time point three. Phonological memory was never significantly predictive at any given time point but contributed the most to outcome measure prediction at time point two. Findings suggest scores on the reading EOG are predicted by a child's development on skills key to the development of early literacy. An individual's literacy skills can be used to estimate later performance on this high stakes test of reading ability. The results of this study suggest students can be screened for potential EOG failure and interventions can be implemented to remediate key skills. This study also suggests a model for the evaluation

Assessment and early instruction of preschool children at risk for reading disability
Hindson, B (Hindson, B); Byrne, B (Byrne, B); Fielding-Barnsley, R (Fielding-Barnsley, R); Newman, C (Newman, C); Hine, DW (Hine, DW); Shankweiler, D (Shankweiler, D)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 97   Issue: 4   Pages: 687-704
  DOI: 10.1037/0022-0663.97.4.687   Published: NOV 2005
Preschool children at familial risk for reading disability were assessed on cognitive and linguistic variables and compared with preschoolers without familial risk. Risk children displayed performance profiles resembling those of older children with reading disability. Each group received intensive instruction in phonemic awareness and structured book reading. Instructed risk children made somewhat smaller gains than the nonrisk and required more teaching sessions to reach criterion. Rhyme and phoneme awareness predicted instruction outcome levels, and vocabulary and verbal short-term memory predicted number of teaching sessions to criterion. In kindergarten, the nonrisk group outperformed the risk group on reading and spelling, although the risk group reached grade-appropriate levels. At-risk children can be helped by appropriate preschool instruction, but they require more sustained teaching than nonrisk preschoolers.

Literacy Assessment in Kindergarten: A Longitudinal Study of Teachers' Use of Alternative Forms of Assessment.
Hodges, Carol Ann; 1992
A study compared teachers' assessments of students based on alternative evaluation techniques to student assessments based on standardized tests. Teachers in seven kindergarten classrooms evaluated their students (approximately 130 each year) in each of 3 successive years according to how well they had mastered a set of criteria which the teachers felt represented the successful reader and writer at the end of kindergarten. Standardized tests were also administered to the kindergarten students. Results indicated that: (1) a significant relationship existed between teachers' assessments of students and the students' performance on the standardized test; (2) 56% of the variance between the total teacher groupings and the total test scores appeared to be due to some common factors; (3) when results differed, teachers ranked students in the next lower category 76% of the time the first year, 88% of the time the second year, and 98% of the time the third year. Follow-up interviews indicated that teachers felt more confident in their ability to make decisions about students' abilities; parents and teachers felt that teachers' evaluations provided more useful information than the standardized tests did; the principal did not agree to ban standardized tests as the teachers had requested.
Findings suggest that teacher judgments, based on knowledge of their students' development and knowledge of the processes involved in reading and writing, may be a more valid means of obtaining information for instructional decisions. (One table of data and the kindergarten reading strategies checklist are included; 16 references are attached.)

The contribution of sensitivity to speech rhythm and non-speech rhythm to early reading development
Holliman, AJ (Holliman, Andrew J.)[1]; Wood, C (Wood, Clare)[1]; Sheehy, K (Sheehy, Kieron)[2]
EDUCATIONAL PSYCHOLOGY Volume: 30   Issue: 3   Pages: 247-267   Article Number: PII 919384362   DOI: 10.1080/01443410903560922   Published: 2010

Both sensitivity to speech rhythm and non-speech rhythm have been associated with successful phonological awareness and reading development in separate studies. However, the extent to which speech rhythm, non-speech rhythm and literacy skills are interrelated has not been examined. As a result, five- to seven-year-old English-speaking children were assessed on measures of speech rhythm sensitivity, non-speech rhythm sensitivity (both receptive and productive), reading attainment and phonological awareness. Hierarchical regression analyses revealed that productive non-speech rhythm was unable to predict variance in reading attainment independently of phonological awareness and speech rhythm sensitivity. Receptive sensitivity to speech rhythm and non-speech rhythm were both able to predict a significant amount of unique variance in reading attainment after controlling for age, vocabulary, phonological awareness, short-term memory and each other. The findings suggest that receptive sensitivity to speech rhythm and non-speech rhythm, while related to each other, also make contributions to reading attainment that are independent of each other. These findings provide only partial consistency with the general auditory processing deficit theory of reading difficulties, but are in line with the emerging theoretical claim that sensitivity to speech prosody may be implicated in successful literacy development.

Using CBM as an indicator of decoding, word reading, and comprehension: Do the relations change with grade?
Hosp, MK (Hosp, MK); Fuchs, LS (Fuchs, LS)
SCHOOL PSYCHOLOGY REVIEW Volume: 34   Issue: 1   Pages: 9-26   Published: 2005

The primary purpose of this study was to assess whether the relation between curriculum-based measurement (CBM) and specific reading skills changes as a function of grade. In addition, this study sought to identify cutscores that correspond with benchmark performance on a variety of reading subskills at Grades 1 through 4. Participants were 310 students, distributed approximately equally across grades, from four schools. Participants were administered CBM reading passages and the Word Attack, Word Identification, and Passage Comprehension subtests from the Woodcock Reading Mastery Test-Revised. Findings indicated that the relation between CBM with decoding, word reading, passage comprehension, basic skills, and total reading-short was strong at each grade level. Benchmarks could not be differentiated for individual reading subskills, but were identified for overall reading competence at each grade level. Implications are drawn for helping school psychologists and other practitioners determine which students need further instructional support in reading.

The Early Development Instrument: An Examination of Convergent and Discriminant Validity (EJ934563)

Author(s):   Hymel, Shelley; LeMare, Lucy; McKee, William

Pub Date: 2011-09-00

Abstract:
The convergent and discriminant validity of the Early Development Instrument (EDI), a teacher-rated assessment of children's "school readiness", was investigated in a multicultural sample of 267 kindergarteners (53% male). Teachers evaluations on the EDI, both overall and in five domains (physical health/well-being, social competence, emotional maturity, language/cognition, communication/general knowledge), were related to direct, child-based assessments of performance on two standardized measures of school readiness, and measures of phonological awareness and early social competence.

Regression analysis indicated that together the four comparison measures accounted for 36% of variance in overall EDI scores, each making a significant and unique contribution. Results supported the convergent validity of overall EDI scores but not the discriminant validity of EDI domain scores. Moreover, correlations between EDI scores and comparison measures varied widely across teachers, suggesting considerable individual differences in teacher's ability to evaluate school readiness relative to direct, child-based assessments, and confirming that the EDI is more appropriate for deriving inferences at higher aggregated levels such as community or region. The validation of EDI domain scores remains an important challenge in future research.

Indiana Reading Assessment--Kindergarten. Technical Report
2007
Research was conducted to evaluate how well the "Indiana Reading Assessment--Kindergarten" evaluates various reading skills of kindergarten students. Multiple analyses were conducted; while the results of all the analyses were encouraging, the results derived from the concurrent validity study were most significant. All correlations were significant beyond the .05 level, indicating that the tool is a valid instrument for assessing phonemic awareness, phonics, vocabulary, and reading comprehension skills. Overall validity is also established by the Cronbach's alpha of .838. Two types of analysis were performed in order to evaluate whether the "Indiana Reading Assessment--Kindergarten" was reliable: split-half reliability and inter-rater reliability. In both analyses, the resulting correlations were robust. The "Indiana Reading Assessment--Kindergarten" was designed specifically for Indiana teachers to use in assessing students' reading abilities as determined by Indiana's Academic Standards for Reading. Although this report establishes the assessment tool as an effective assessment, the goal of the assessment goes beyond simply assessing to assist teachers in identifying at-risk students to provide intervention to enable students to realize reading success. Further experimental research is necessary to determine whether educators are effectively using the tool to identify at-risk students and provide intervention.
Six appendixes are included: (1) Standards Coverage Charts; (2) Assessment Samples--Phonemic Awareness; (3) Test Comparisons; (4) Teacher Feedback; (5) Demographic Data; and (6) Descriptive Statistics. [For Grades 1 and 2 Assessments, see ED502106 and ED502107.]

Reading comprehension tests vary in the skills they assess: Differential dependence on decoding and oral comprehension
Keenan, JM (Keenan, Janice M.)[1]; Betjemann, RS (Betjemann, Rebecca S.)[2]; Olson, RK (Olson, Richard K.)[1]
SCIENTIFIC STUDIES OF READING Volume: 12   Issue: 3   Pages: 281-300   DOI: 10.1080/10888430802132279   Published: 2008
Comprehension tests are often used interchangeably, suggesting an implicit assumption that they are all measuring the same thing. We examine the validity of this assumption by comparing some of the most popular reading comprehension measures used in research and clinical practice in the United States: the Gray Oral Reading Test (GORT), the two assessments (retellings and comprehension questions) from the Qualitative Reading Inventory (QRI), the Woodcock-Johnson Passage Comprehension subtest (WJPC), and the Reading Comprehension test from the Peabody Individual Achievement Test (PIAT). Modest intercorrelations among the tests suggested that they were measuring different skills. Regression analyses showed that decoding, not listening comprehension, accounts for most of the variance in both the PIAT and the WJPC; the reverse holds for the GORT and both QRI measures. Large developmental differences in what the tests measure were found for the PIAT and the WJPC, but not the other tests, both when development was measured by chronological age and by word reading ability. We discuss the serious implications for

research and clinical practice of having different comprehension tests measure different skills and of having the same test assess different skills depending on developmental level.

Kendeou, P.a , Papadopoulos, T.C.b , Spanoudis, G.b
Processing demands of reading comprehension tests in young readers
(2012) Learning and Instruction, 22 (5), pp. 354-367.
http://www.scopus.com/inward/record.url?eid=2-s2.0-84862773148&partnerID=40&md5=f247b38aabe0e0180dc1112df78817c1
School of Health Sciences, Neapolis University Pafos, 2 Danaes Avenue, Pafos 8042, Cyprus;
Department of Psychology, Center for Applied Neuroscience, University of Cyprus, Cyprus
In the present study we examined the processing demands of three reading comprehension tests, namely the Woodcock-Johnson Passage Comprehension (WJPC), a Curriculum-Based Measure test (CBM-Maze), and a Recall test, in the early elementary years. Our investigation was theoretically motivated by Perfetti's Verbal Efficiency Theory and examined the contribution of a set of skills that are important in early reading (i.e., rapid naming, phonological processing, orthographic processing, fluency, vocabulary, and working memory) to the three reading comprehension tests. Furthermore, because this set of skills undergo rapid development in the early years, we assessed them in two consecutive years, Grade 1 and Grade 2, before examining their prediction to the three reading comprehension tests in Grade 2. The findings showed that the three reading comprehension tests pose different demands to the young reader. Implications of these findings are discussed with respect to reading comprehension assessment and diagnosis of reading difficulties.

Early reading performance: a comparison of teacher-based and test-based assessments.
Kenny, D T; Chekaluk, E
Journal of Learning Disabilities vol. 26, no. 4 (Apr 1993); 1993
An unresolved question in early screening is whether test-based or teacher-based assessments should form the basis of the classification of children at risk of educational failure. Available structured teacher rating scales are lacking in predictive validity, and teacher predictions of students likely to experience reading difficulties have yielded disappointing true positive rates, with teachers failing to identify the majority of severely disabled readers. For this study, three educational screening instruments were developed: (a) a single teacher rating, categorizing children into three levels of reading ability (advanced, average, poor); (b) a 15-item teacher questionnaire designed to measure students' cognitive and language ability, attentional and behavioral characteristics, and academic performance; and (c) a battery of language and reading tests that are predictive of, or correlate with, reading failure. The concurrent validity of each instrument was assessed in a sample of 312 Australian schoolchildren from kindergarten, Year 1, and Year 2. Students were assessed at the end of the 1989 school year after having completed 1, 2, or 3 years of schooling. The results suggest that the nature of the skills required for success in reading changes in the first 3 years of schooling. Both teachers and tests concur more closely as children progress through the elementary years and as the risk behavior (reading) becomes more accessible to direct measurement. Carefully focused teacher rating scales may be a cost-effective means of identifying children at risk of reading failure. Improved teacher rating scales should be developed and used to assist in the early screening process.

Comparing Longitudinal Profile Patterns of Mathematics and Reading in Early Child Longitudinal Study, Kindergarten: The Profile Analysis via Multidimensional Scaling (PAMS) Approach
Kim, Se-Kang
Asia Pacific Education Review vol. 11, no. 2 (June 2010), p. 189-198

The aim of the study is to compare longitudinal patterns from Mathematics and Reading data from the direct child assessment of Early Child Longitudinal Study, Kindergarten (ECLS-K, US Department of Education, National Center for Education Statistics 2006), utilizing Profile Analysis via Multidimensional Scaling (PAMS). PAMS has been used initially to discover profile patterns in crosssectional data, and further applied to uncover longitudinal patterns by considering each time point as a coordinate of longitudinal patterns. The ECLS-K data analyzed here included longitudinal information about student achievement. The current study applied longitudinal PAMS to the data and examined how much the longitudinal patterns predict the fifth-grade achievement scores. Results showed that the longitudinal patterns that depicted the growing trend and the growing-decaying trend were significantly related to the fifth-grade achievement scores. Educational implications and discussions of longitudinal patterns were included.

Proximal and Distal Predictors of Reading Comprehension: Evidence from Young Korean Readers
Kim, YS (Kim, Young-Suk)[1,2]

The present study investigated proximal and distal predictors of reading comprehension by including latent factors such as alphabet knowledge, phonological awareness, semantic knowledge, word reading, oral reading fluency, and reading comprehension. The sample consisted of 79 five-year-old Korean-monolingual children who were assessed at the end of the school year. The results showed that alphabet knowledge, phonological awareness, and semantic knowledge latent variables were all positively and highly related to word-reading skills, but phonological awareness made a unique contribution above and beyond alphabet knowledge and semantic knowledge. Word reading was highly related to oral reading fluency and directly related to reading comprehension. Oral reading fluency, although a separate construct from word reading accuracy, was not uniquely related to reading comprehension after accounting for the effects of word reading and semantic knowledge. Semantic knowledge was fairly strongly and uniquely related to reading comprehension.

Theory-based prediction of early reading
Kirby, JR (Kirby, JR); Parrila, RK (Parrila, RK)

This article presents a theory of the cognitive processes involved in learning to vend and examines the degree to which measures derived from this theory are able to predict success in reading. Measures were selected to address five phonological processing constructs (naming speed, memory, rhyming, phonological synthesis, and phonological analysis), letter knowledge,, and the ability to pronounce words by analyzing them into smaller parts (decoding). Measures of these constructs and several measures of reading achievement were administered to an initial sample of 161 kindergarten children and then readministered to as many of the same children as possible in grades 1 and 2; in grade 3 the reading achievement tests were administered. Principal components analyses were used to derive factor scores for the phonological constructs in kindergarten and grades I and 2. In grade 2 five factors were found, but in kindergarten and grade 1 the phonological synthesis and analysis measures formed one phonological awareness factor, The factor scores, letter knowledge, decoding, and the reading achievement scores for each grade were used as predictors of reading achievement in subsequent grades in a series of hierarchical regression analyses. Results supported the proposed theory, with phonological awareness (or analysis), naming speed, and letter recognition being the most frequent significant predictors and R^2s ranging from .69 to .89. The constructs identified in the

theory are argued to be important targets for both assessment and instruction. The value of theoretical models of achievement is discussed.

Predictors of Reading Skills for Kindergartners and First Grade Students in Spanish: A Longitudinal Study (EJ948735)

Author(s):	Kim, Young-Suk; Pallante, Daniel	Pub Date:	2012-01-00
Source:	Reading and Writing: An Interdisciplinary Journal, v25 n1 p1-22 Jan 2012		

Abstract:
This study investigated predictors of word reading and reading comprehension skills using longitudinal data from Spanish-speaking kindergartners (N = 163) and first grade students (N = 305) from high SES families in Chile. Individual differences in letter-naming fluency and phonemic segmentation fluency, but not vocabulary, were positive predictors of word reading, over time, for kindergartners. Furthermore, kindergartners with higher letter-naming fluency and phonemic segmentation fluency had a faster rate of change in word reading over time. For first graders' reading comprehension, word reading, nonsense word fluency, and vocabulary were positively and uniquely related. However, the rate of change in the reading comprehension outcome differed over time by children's level of vocabulary, nonsense word fluency, and word reading. These results suggest that code-related skills are important for word reading, but vocabulary might not have a direct, unique relation with word reading in a transparent orthography. In addition, phonological decoding fluency appears to contribute to reading comprehension even over and above word reading accuracy in Spanish.

Koh, K.H.a , Paris, S.G.b
Developing new reading assessments to promote beginning reading in Singapore
(2011) Asia Pacific Education Review, 12 (1), pp. 23-33.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
799552102860&partnerID=40&md5=092c3891dfa5449ccbaaf635b47ebe95
Curriculum, Teaching and Learning Academic Group, National Institute of Education Singapore, Nanyang Technological University, 1 Nanyang Walk, Singapore 637616, Singapore;
Centre for Research in Pedagogy and Practice, National Institute of Education Singapore, Nanyang Technological University, 1 Nanyang Walk, Singapore 637616, Singapore
Effective reading instruction and intervention are rooted in effective assessments of children's developing skills in reading. The article aims to describe the development of new reading assessments to help promote beginning reading in Singapore primary schools. We begin with an introduction to the educational landscape and policies before articulating the need for developing the new reading assessments to enhance teachers' capacity in assessing children's beginning reading for formative purposes. A detailed description of the reading assessments is included in the article as we hope that the innovation can shed some light on primary reading instruction and assessment in the Asia Pacific region. We conclude the article by discussing the implications of the new reading assessments on the teaching and learning of beginning reading.

Predicting children's competence in the early school years: A meta-analytic review
La Paro, KM (La Paro, KM); Pianta, RC (Pianta, RC)

School readiness screenings are prevalent throughout the United States. Although readiness encompasses a multitude of components, readiness assessments generally focus on measuring and predicting children's preacademic skills and behaviors and are often the basis for placement and programming decisions. However, no quantitative estimates of effect sizes exist for the relations between preschool or kindergarten academic/cognitive and social/behavioral assessments and early school outcomes. This review presents the results of a meta-analysis of cross-time relations of academic/ cognitive and social/behavioral assessments from preschool to second grade. Results from 70 longitudinal studies that reported correlations between academic/cognitive and social/behavioral measures administered in preschool or kindergarten and similar measures administered in first and second grade were included in the analysis. Academic/cognitive assessments predicting similar outcomes showed moderate effect sizes across both time spans; effect sizes were small for social/behavioral predictors of early school social outcomes. Effect sizes varied considerably across individual studies and samples. Findings are discussed in terms of assessment and conceptualization of school readiness, the role of school and classroom experiences in contributing to individual differences in school outcomes, and the importance of a quantitative estimate of effect size for early education policy and practice.

A Responsiveness to Intervention Solution to the Problem of False-Positive Risk Classifications in Kindergarten Reading Assessment.
Lentini, Athena R (2011)
The current study examined a solution to high false-positive risk classification rates in early kindergarten reading assessment by investigating an evidence-based method of identifying students with possible false-positive risk classifications and evaluating the effects of returning those students to general classroom instruction. Researchers assessed a cohort of kindergarten students (n = 48) identified as at risk who were participating in a published full-year reading intervention program. Students with very strong initial curriculum mastery (n = 9) were identified as having possible false-positive risk classifications after approximately nine weeks, exited from intervention, and returned to general classroom instruction. Findings show that very strong responders who were exited from intervention continued to make academic progress and scored outside of the risk range across multiple reading measures at the end of the year. Additionally, performance on reading outcome measures was compared to the performance of a historical cohort of students with similar initial curriculum mastery who remained in the intervention for the entire academic year. Statistical tests found no patterns favoring either group on their end-of-kindergarten reading scores, indicating that the students with possible false-positive risk classifications experienced no clear differential effect of being exited from intervention services after nine weeks.

Early experiences matter: Lasting effect of concentrated disadvantage on children's language and cognitive outcomes
Lloyd, Jennifer E V; Li, Leah; Hertzman, Clyde
Health & Place vol. 16, no. 2 (Mar 2010), p. 371-380
A small but provocative literature suggests that neighbourhood socioeconomic conditions experienced by children early in life influence a variety of health and developmental outcomes later in life. We contribute to this literature by testing the degree to which neighbourhood socioeconomic conditions that children experience in Kindergarten influence their later language and cognitive outcomes in early adolescence, over and above current

neighbourhood context and various child-level covariates including scores on a Kindergarten measure of school readiness. Cross-classified random effects modelling (CCREM) analyses were performed on a study population of 2648 urban children residing throughout the province of British Columbia, Canada, who were followed longitudinally from Kindergarten (age 5/6) to Grade 7 (age 12/13). Findings demonstrate that neighbourhood concentrated disadvantage experienced during Kindergarten has a durable, negative effect on children's reading comprehension outcomes seven years later-providing evidence that early social contextual experiences play a critical role in the lives of children. Possible explanations and future directions are discussed.

The Early Reading Screening Instrument: a method for identifying kindergarteners at risk for learning to read
Lombardino L. J.; Morris D.; Mercado L.; Defillipo F.; Sarisky C.; Montgomery A.
International Journal of Language & Communication Disorders, Volume 34, Number 2, 1 April 1999 , pp. 135-150(16)
This study was designed to provide speech-language pathologists and educators with a method for identifying children at risk for reading failure. The Early Reading Screening Instrument (ERSI) was given to 149 end-of-the-year kindergarten children. Half of the sample was tested 1 year later with standardized reading measures. Total ERSI scores from the kindergarten children strongly correlated with reading skills in first grade. Reading comprehension in first grade was the skill most strongly predicted by the subjects' total ERSI scores. The word recognition and invented spelling subtests of the ERSI were the best variables to be selected as predictors of first grade word analysis, word identification, and passage comprehension skills. A split-half reliability study of the ERSI showed that a shortened form could be used with the same degree of predictive validity. The ERSI or similar tools can be used to assess reading readiness in kindergarten children so that we can promptly begin an intervention to prevent or, at the very least, to diminish risk for reading failure. For screening reading readiness across different languages or cultures, the content of the four ERSI subtests can easily be modified.

Lonigan, C.J.a , Allan, N.P.b , Lerner, M.D.b
Assessment of preschool early literacy skills: Linking children's educational needs with empirically supported instructional activities
(2011) Psychology in the Schools, 48 (5), pp. 488-501.
http://www.scopus.com/inward/record.url?eid=2-s2.0-79953297930&partnerID=40&md5=8104dd0fb1a33f34faee9904b3dccc7d
Department of Psychology and the Florida Center for Reading Research, Florida State University, United States; Department of Psychology, Florida State University, United States
The importance of the preschool period in becoming a skilled reader is highlighted by a significant body of evidence that preschool children's development in the areas of oral language, phonological awareness, and print knowledge is predictive of how well they will learn to read once they are exposed to formal reading instruction in elementary school. Although there are now a number of empirically supported instructional activities for helping children who are at risk of later reading difficulties to acquire these early literacy skills, limitations in instructional time and opportunities in most preschool settings require the use of valid assessment procedures to ensure that instructional resources are utilized efficiently. In this article, we discuss the degree to which informal, diagnostic, screening, and progress-monitoring assessments of preschool early literacy skills can inform instructional decisions by considering the strengths and weaknesses of each approach to assessment.

Classifying Academically At-Risk First Graders into Engagement Types: Association with Long-Term Achievement Trajectories
Luo, W (Luo, Wen)[1]; Hughes, JN (Hughes, Jan N.)[2]; Liew, J (Liew, Jeffrey)[2]; Kwok, O (Kwok, Oiman)[2]

Based on a sample of 480 academically at-risk first graders, we used a cluster analysis involving multimethod assessment (i.e., teacher-report, peer-evaluation, and self-report) of behavioral and psychological engagement to identify subtypes of academic engagement. Four theoretically and practically meaningful clusters were identified and labeled as cooperative (n = 95), resistive (n = 96), enthusiastic (n = 188), and disaffected (n = 101). The 4 types did not differ in IQ measured with the Universal Nonverbal Intelligence Test. The cooperative group consisted of more female and Hispanic students, whereas the resistive group consisted of more male and African American students. The cooperative group was the most popular among peers, followed by the enthusiastic group. The disaffected and resistive groups had more emotional symptoms than the cooperative and enthusiastic groups. Academic engagement types also differed in growth trajectories of academic achievement measured with Woodcock Johnson III Tests of Achievement from second to fourth grade. For reading, the cooperative and enthusiastic groups outperformed the resistive and disaffected groups at the beginning. However, the growth rate was similar across engagement types. For math, the engagement types did not differ at the beginning. However, the cooperative group developed at a faster rate and had higher math achievement by fourth grade than the other types. The findings support the importance of teaching temperament-based regulatory skills and of providing a positive psychological climate for children's academic learning.

McAlenney, A.L.a , Coyne, M.D.b
Identifying at-risk students for early reading intervention: Challenges and possible solutions
(2011) Reading and Writing Quarterly, 27 (4), pp. 306-323.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
80052194685&partnerID=40&md5=45dedce5a29dd4329b4458953b061d07
St. John's University, Queens, NY, United States;
University of Connecticut, Storrs, CT, United States
Accurate identification of at-risk kindergarten and 1st-grade students through early reading screening is an essential element of responsiveness to intervention models of reading instruction. The authors consider predictive validity and classification accuracy of early reading screening assessments with attention to sensitivity and specificity. They review screening strategies of previous kindergarten and 1st-grade intervention studies. They present practical, intervention-based solutions to low classification accuracy, including strategies that may reduce false-positive risk classifications.

McDermott, P.A.
Comparative functions of preschool learning style and IQ in predicting future academic performance
(1984) Contemporary Educational Psychology, 9 (1), pp. 38-47.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
0002089633&partnerID=40&md5=b7d6c553cb6e5245cddefda6dc8216cb
University of Pennsylvania, United States
Early assessment programs frequently rely on intelligence tests for making predictions regarding children's future school performance. Unfortunately, IQ scores provide little information to those who must develop educational interventions tailored to the unique ways in which children respond to learning situations. Alternatively, measures of children's learning style focus on distinct patterns of learning-related behavior manifested in classroom settings. Each dimension of learning style is composed of observable skills that are potentially teachable or alterable through available instructional procedures. In order to examine the relative contributions of learning style dimensions, IQ, and their interactions to the prediction of subsequent performance, 100 kindergarten children were evaluated by teachers using the Study of Children's Learning Styles scale and were administered the

Kuhlmann-Anderson Intelligence Test. Fifteen months later the children's first-grade achievement was determined through standardized tests and teacher-assigned grades in reading, language, and mathematics. Relationships between the predictor and criterion variables were studied through patterns of bivariate correlations, canonical variate loadings, and standardized regression weights. Although IQ was found the better predictor, learning styles accounted for appreciable and statistically significant proportions of the variability in later achievement. The learning style dimensions functioned differentially across areas of achievement to enhance overall prediction either by complementing or interacting with the predictions afforded by IQ. The results are examined in the light of earlier research on learning-related behavior.

Manipulating Word Properties: Targeting Vocabulary Learning for Children with and without Speech Sound Inaccuracies (EJ957495)

Abstract:
The purpose of this study was twofold: (1) to examine the relations between speech sound accuracy, vocabulary, and phonological awareness, and (2) to examine the effect of word properties of neighborhood density and phonotactic probability on word learning within a storybook context, for children with and without speech sound inaccuracies. Fifty K-1 children (aged 5-6 years; 25 with, 25 without speech sound inaccuracies) completed inclusionary measures of oral language, speech sound accuracy, hearing screening, oral-motor screening, and nonverbal intelligence. Participants completed study-specific measures of standardized receptive and expressive vocabulary, stimuli-specific vocabulary knowledge, and phonological awareness. Twice weekly, for 30 minutes, an 11-week storybook-based intervention took place, targeting word learning, with words selected based on density and probability. Storybooks were researcher generated to intentionally manipulate the word properties of the stimuli words. Each storybook contained two stimuli words, four exposures per word per reading. Results indicated that both speech sound accuracy and vocabulary predicted unique variance in phonological awareness in children with speech sound inaccuracies. No statistically significant differences in the absolute number of words children learned emerged. Group differences were noted in emerging word knowledge with typically developing children outperforming children with speech sound inaccuracies. Differences were noted in the types of words that children learned. Results suggest that children with speech sound inaccuracies may be at risk for later reading difficulties. Speech language pathologists need to be targeting words that promote change within a child's phonological system (sublexical) and his/her lexical system.

Background. Previous research has produced conflicting results regarding the effects of season of birth and age-position on cognitive attainments. In Northern Ireland the school year divides the summer season into two providing an opportunity to evaluate the relative contribution of season of birth and age-position effects.

Aims. To investigate the relationship between attainment in literacy skills and month of birth for primary and secondary school pupils and to determine the relationship between motor skills and month of birth in primary school pupils.

Sample. One thousand one hundred and twenty four primary school pupils participated, and results for key stage 3 (KS3) English and GCSE English Language, for 3,493 Year 10 and 3,697 Year 12 secondary school pupils, respectively, were obtained.

Method. Primary school pupils were individually assessed using standardised reading and spelling tests, as well as tests of motor skill. They were also assessed using a standardised group reading test in their class groups. For the secondary school pupils, the results for two year cohorts, in KS3 English and GCSE English language, respectively, were analysed.

Results. For the primary school pupils there was evidence of both a season of birth and an age-position effect on all of the cognitive measures, particularly in the early years of schooling. There was, also, evidence of a significant age-position effect at both KS3 and GCSE in favour of the older pupils. For the younger primary school pupils there was evidence of significant age-position effects on both motor measures.

Conclusions. The findings from the present study suggest that month of birth may be related to both season of birth and age-position effects. These effects may be compounded, particularly in the early years of primary school, when summer born children are youngest in their year, as in England. In Northern Ireland, age-position effects are also evident in secondary school public examination results, which may have implications for long-term life choices.

Inequality in preschool education and school readiness

Magnuson, KA (Magnuson, KA); Meyers, MK (Meyers, MK); Ruhm, CJ (Ruhm, CJ); Waldfogel, J (Waldfogel, J)

Attendance in U.S. preschools has risen substantially in recent decades, but gaps in enrollment between children from advantaged and disadvantaged families remain. Using data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999, we analyze the effect of participation in child care and early education on children's school readiness as measured by early reading and math skills in kindergarten and first grade. We find that children who attended a center or school-based preschool program in the year before school entry perform better on assessments of reading and math skills upon beginning kindergarten, after controlling for a host of family background and other factors that might be associated with selection into early education programs and relatively high academic skills. This advantage persists when children's skills are measured in the spring of kindergarten and first grade, and children who attended early education programs are also less likely to be retained in kindergarten. In most instances, the effects are largest for disadvantaged groups, raising the possibility that policies promoting preschool enrollment of children from disadvantaged families might help to narrow the school readiness gap.

Kindergarten predictors of first- and second-grade reading achievement

Use of brief experimental analysis for selecting reading interventions for English language learners

Malloy, KJ (Malloy, Kimberley J.); Gilbertson, D (Gilbertson, Donna)[1]; Maxfield, J (Maxfield, Janie)

Identifying an effective instructional intervention for English language learners experiencing reading problems is a difficult task given the vast individual differences in language proficiency, motivation, and school experience for these students. To address this issue, this study investigated the utility of brief experimental analysis as a means to identify the most effective instructional components to increase reading performance for five English language

learners. Using a multielement design, five reading treatments were administered one at a time with increasing language support. There were individual differences in response and all students responded to at least one treatment. Further, an extended analysis of alternating baseline conditions with the hypothesized effective treatment showed that selected interventions increased reading rates for four of the five participants over time. A combination of the three most effective interventions, based on results from the brief experimental analysis, increased reading performance for the fifth student.

Early Prediction of Reading-Achievement - Exploring the Relationship of Cognitive and Noncognitive Measures to Inaccurate Classifications of At-Risk Status
MANTZICOPOULOS, PY (MANTZICOPOULOS, PY); MORRISON, D (MORRISON, D)
REMEDIAL AND SPECIAL EDUCATION Volume: 15   Issue: 4   Pages: 244-251
  Published: JUL 1994
The present study examined the early profiles of students who were screened for learning difficulties with search (Silver & Hagin, 1981), an early identification measure, and were found to be adequate or inadequate readers at the end of second grade. In order to gain insight into the problem of inaccurate classifications of at-risk status at kindergarten, this study investigated students' performance on cognitive measures and behavior problems, as well as socioeconomic background and teacher predictions of learning difficulties. Our results indicated that search tends to underidentify as not at risk some children from higher socioeconomic backgrounds and to over-identify as at risk children from lower socioeconomic backgrounds. Information from classroom teachers and individually administered assessment tools is necessary and useful in the process of identifying those young children who are truly at risk and in need of early intervention services.

Incremental and predictive utility of formative assessment methods of reading comprehension
Author(s): Marcotte, AM (Marcotte, Amanda M.)[1]; Hintze, JM (Hintze, John M.)[1]
JOURNAL OF SCHOOL PSYCHOLOGY Volume: 47   Issue: 5   Pages: 315-335   DOI: 10.1016/j.jsp.2009.04.003   Published: OCT 2009
Formative assessment measures are commonly used in schools to assess reading and to design instruction accordingly. The purpose of this research was to investigate the incremental and concurrent validity of formative assessment measures of reading comprehension. It was hypothesized that formative measures of reading comprehension would contribute more to our understanding of students' overall reading abilities than simply oral reading fluency (ORF). It was also hypothesized that measures could be modeled in a meaningful way to explain student performance on criterion measures of academic competence. Four formative measures of reading comprehension - maze (MZ), retell fluency (RTF), written retell (WRT), and sentence verification technique (SVT) - were used to measure unique aspects of reading comprehension through production-type responses. Results suggested that reading comprehension measures, when combined with ORF, added to the total variance associated with reading ability and were reliable indicators of student performance on a high stakes criterion-referenced assessment of grade-level literacy.

Kindergarten prediction of reading and spelling deficits: New results on the prognostic validity of the Bielefelder Screening (BISC)
Marx, P (Marx, Peter); Weber, J (Weber, Jutta)
ZEITSCHRIFT FUR PADAGOGISCHE PSYCHOLOGIE Volume: 20   Issue: 4   Pages: 251-259   DOI: 10.1024/1010-0652.20.4.251   Published: DEC 2006
Phonological processing deficits often cause problems in literacy acquisition. As a consequence, tests such as the Bielefelder Screening (BISC; Jansen, Mannhaupt, H. Marx & Skowronek, 1999) use phonological processing tasks in kindergarten to identify children at risk for later reading and spelling deficits. The authors themselves (Jansen et al., 1999)

reported very positive findings regarding the prognostic validity of the BISC. But there is no replication of their data up to now. In this study the prognostic validity of the BISC was assessed with a sample of 176 children. The children were tested with the BISC four months before school entry and in the four years of primary school reading and spelling were assessed. For most criteria assessed in the study (spelling accuracy, reading speed, reading comprehension), less than half of the children with later deficits were identified by the BISC, and far more than half of the children at risk subsequently did not show a reading or a spelling deficit. The results indicate that the BISC result for an individual child should be interpreted cautiously. The instructional approach to reading in the first grades might affect the predictive validity of an early screening.

Improvement in national test reading scores at Key Stage 1; grade inflation or better achievement?
Meadows, S (Meadows, Sara); Herrick, D (Herrick, David); Feiler, A (Feiler, Anthony)
BRITISH EDUCATIONAL RESEARCH JOURNAL Volume: 33 Issues: 1 Page: 47-59   DOI: 10.1080/01411920601104391   Published: FEB 2007
The aim of the UK National Literacy Strategy is to raise standards in literacy. Strong evidence for its success has, however, been lacking: most of the available data comes from performance on tests administered in schools or from Office for Standards in Education reports and is vulnerable to suggestions of bias. An opportunistic analysis of data from a population cohort study extending over three school years compares school-based scores at school entry and at age 7-8 with independently administered scores on similar tests. The results show a small but statistically significant rise between 1998 and 1999 and between 1998 and 2000 in scores on both Key Stage I Reading Standard Assessment Tasks taken in schools and the reading component of the WORD test taken independently. This is clear evidence for a real rise in reading attainment over this period, which may be attributable to the children's experience of the National Literacy Strategy.

Literacy as a unidimensional multilevel construct: Validation, sources of influence, and implications in a longitudinal study in grades 1 to 4
Mehta, PD (Mehta, PD); Foorman, BR (Foorman, BR); Branum-Martin, L (Branum-Martin, L); Taylor, WP (Taylor, WP)
SCIENTIFIC STUDIES OF READING Volume: 9   Issue: 2   Pages: 85-116   DOI: 10.1207/s1532799xssr0902_1   Published: 2005
This study examined the extent to which literacy is a unitary construct, the differences between literacy and general language competence, and the relative roles of teachers and students in predicting literacy outcomes. Much of past research failed to make a distinction between variability in outcomes for individual students and variability for outcomes in the classrooms students share (i.e., the classroom level). Utilizing data from 1,342 students in 127 classrooms in Grades I to 4 in 17 high-poverty schools, confirmatory factor models were fit with single- and two-factor structures at both student and classroom levels. Results support a unitary literacy factor for reading and spelling, with the role of phonological awareness as an indicator of literacy declining across the grades. Writing was the least related to the literacy factor but the most impacted by teacher effects. Language competence was distinct at the student level but perfectly correlated with literacy at the classroom level. Implications for instruction and assessment of reading comprehension are discussed.

Changes in children's cognitive development at the start of school in England 2001-2008
Merrell, C (Merrell, Christine)[1]; Tymms, P (Tymms, Peter)
OXFORD REVIEW OF EDUCATION Volume: 37   Issue: 3   Pages: 333-345   DOI: 10.1080/03054985.2010.527731   Published: 2011
Since 1997, England has seen massive changes in the Early Years including the introduction of an early childhood curriculum, free pre-school education for three-year-olds

and local programmes for disadvantaged communities. Many of these initiatives took time to introduce and become established. Beginning in 2001, and each year thereafter until 2008, the authors collected consistent data from thousands of children when they started school at the age of four on a range of variables, chosen because they are good predictors of later success. These included vocabulary, early reading and early mathematics. Children from the same set of 472 state primary schools in England were assessed each year. This paper contributes to the existing studies of educational trends over time by examining the extent to which children's scores on these measures changed over that period; in general, they were found to have remained stable.

Early literacy development: Skill growth and relations between classroom variables for preschool children
Missall, KN (Missall, Kristen N.); McConnell, SR (McConnell, Scott R.); Cadigan, K (Cadigan, Karen)
JOURNAL OF EARLY INTERVENTION Volume: 29   Issue: 1   Pages: 1-21   DOI: 10.1177/105381510602900101   Published: FAL 2006
Promoting the development of early literacy skills might prevent later reading achievement problems. This longitudinal study investigated rates of early literacy growth using Individual Growth and Development Indicators (IGDIs) for 69 preschool children classified as belonging to 1 of 4 groups with or without risk for developing early literacy skills. Group differences were obtained for 3 IGDIs (Picture Naming, Rhyming, and Alliteration) and rate of growth over time varied across groups for Picture Naming and Rhyming. Percent time spent in various classroom situations, as measured by the Ecobehavioral System for the Complex Assessment of Preschool Environments (ESCAPE), was correlated with each child's rate of IGDI growth. Correlations between IGDI growth rates and ESCAPE variables suggest classroom areas in which interventions could be concentrated for specific groups of children. Implications for practice and future research are discussed.

Examination of the predictive validity of preschool early literacy skills
Missall, K (Missall, Kristen)[1]; Reschly, A (Reschly, Amy)[2]; Betts, J (Betts, Joseph); McConnell, S (McConnell, Scott)[3]; Heistad, D (Heistad, David); Pickart, M (Pickart, Mary); Sheran, C (Sheran, Christina); Marston, D (Marston, Doug)[4]
SCHOOL PSYCHOLOGY REVIEW Volume: 36   Issue: 3   Pages: 433-452   Published: 2007
The predictive validity of early literacy skills of children among preschool is relatively unknown. The purpose of this longitudinal study was to provide this examination. From a sample of preschoolers, longitudinal data were available for 143 of the children in kindergarten and for 116 of them through the end of first grade. Preschool children were assessed in the fall, winter, and spring with Early Literacy Individual Growth and Development Indicators (EL-IGDIs). In the fall, winter, and spring of kindergarten, literacy skills were assessed and curriculum-based measurement data in reading were collected in the spring of kindergarten and first grade. Results showed significant increases in mean EL-IGDI scores. In most instances, preschool administrations of the EL-IGDIs were moderately correlated with kindergarten measures of alphabetic principle and phonological awareness. Preschool EL-IGDIs were found to be significantly predictive of later outcomes in oral reading fluency both at the end of kindergarten and at the end of first grade. The diagnostic utility of these measures was found to be strong. Implications for practice are discussed.

Using Individual Growth and Development Indicators to measure early language and literacy
Missall, KN (Missall, Kristen N.)[1]; Carta, JJ (Carta, Judith J.)[2]; McConnell, SR (McConnell, Scott R.)[3]; Walker, D (Walker, Dale)[2]; Greenwood, CR (Greenwood, Charles R.)[2]
INFANTS AND YOUNG CHILDREN Volume: 21   Issue: 3   Pages: 241-253   Published: JUL-SEP 2008

Learning to read is founded on the acquisition of oral language, phonological processing, print awareness, knowledge, and comprehension skills acquired before school entry. Practitioners who work with very young children have limited means of knowing whether interventions in these areas are helping children make progress toward important language and early literacy outcomes. As a result, reporting of child outcomes in these areas is usually insufficient at the program, state, and national levels. Child performance measures are needed that are easy and repeatable so that estimates of child growth can be obtained and used to inform intervention decisions. Individual Growth and Development Indicators are emerging as a robust approach to assessment particularly well suited to these challenges. This article describes 5 Individual Growth and Development Indicators for measuring progress in young children's early language and literacy. A brief overview of theoretical and empirical background information is provided demonstrating the reliability, validity, and feasibility of this approach for measuring growth in these critical areas of child development. Examples illustrate how these measures are used in early intervention programs for evaluating the progress of children as well as for program evaluation.

In this study we examined the ability of 6 kindergarten prereading skills to predict later reading achievement. The prereading skills of 102 children were assessed at the beginning, middle, and end of kindergarten, and reading achievement was assessed at the end of first and second grade. Results showed that (1) 4 kindergarten skills (alphabet recognition, concept of word in text, spelling with beginning and ending consonants, and word recognition) effectively predicted success in first-grade reading (R = .77); (2) effective predictions of first- and second-grade reading achievement could be made at the middle of kindergarten; and (3) a phonemic spelling task was superior to an oral phoneme segmentation task in predicting success in beginning reading.

Analysis of the implementation of a dynamic assessment device of processes involved in reading with learning-disabled children
Navarro, JJ (Navarro, Juan-Jose)[1]; Mora, J (Mora, Joaquin)[1]
The renewed interest in the dynamic assessment of specific domains has led to reconsideration of this theory and the technique's contribution to the learning-teaching process. In this article, we analyze some elements concerning the internal structure of a dynamic assessment device of processes involved in reading tasks, establishing some of the device's reliability parameters after its experimental application to 60 students with reading disabilities. Our work analyzes the correlations matrix of the different processes, and determines those reading processes that entail greater difficulties for students. In addition, our study establishes the device's predictive validity in relation to the teacher's evaluation of a student's school performance and progress, analyzing to what extent the device offers additional information as compared with static comprehension, personal-social adjustment or IQ tests. The results reveal the significant predictive validity of the device regarding a student's school performance and progress, as well as its incremental validity in relation to static tests.

Psychometric Properties of the Texas Primary Reading Inventory for Early Reading Screening in Kindergarten
Nelson, Jason M
This study investigated the psychometric properties of the kindergarten Texas Primary Reading Inventory (TPRI; Texas Education Agency and the University of Texas System,

2004-2006) Mid-Year screeners with a sample of 180 students. The TPRI screeners were designed to determine which students are not at risk for later reading failure. Results indicated adequate internal consistency reliability and concurrent and predictive validity for screening purposes. Classification validity analyses indicated low false negative rates and high negative predictive power but substantial false positive rates and low positive predictive power. The TPRI Mid-Year screeners were found to be adequate instruments for identifying students who are unlikely in need of further assessment. Recommendations are provided for using the TPRI within a response-to-intervention or other prevention-based service delivery model.

Kindergarten Readiness Assessment Process: Perceptions of Parents, Teachers, and Administrators.
Niemeyer, Judith A; Scott-Little, Catherine; Hussey, Susan
2002
Kindergarten readiness assessment is considered important for identifying and facilitating successful school experiences for young children. However, little is known about the assessment process schools are using. The purpose of this study was to examine teachers', parents', and administrators' perceptions of the kindergarten readiness assessment process. A questionnaire was mailed to administrators, teachers, and parents in four states. Responses were received from 30 administrators, 81 teachers, and 85 parents, and followup telephone interviews were conducted with 7 administrators, 10 teachers, and 17 parents. Results indicate that parents have been minimally involved in the assessment process and have little knowledge of what it entails. In addition, it is apparent that most school districts have developed their own instruments for conducting kindergarten readiness assessment with great variability in timing related to assessment administration. Implications of these results are discussed in relation to young children's success in kindergarten.

The Componential Model of Reading: Predicting First Grade Reading Performance of Culturally Diverse Students from Ecological, Psychological, and Cognitive Factors Assessed at Kindergarten Entry
Ortiz, M (Ortiz, Miriam)[1]; Folsom, JS (Folsom, Jessica S.)[1]; Al Otaiba, S (Al Otaiba, Stephanie)[2]; Greulich, L (Greulich, Luana)[2]; Thomas-Tate, S (Thomas-Tate, Shurita)[2]; Connor, CM (Connor, Carol M.)[1]
JOURNAL OF LEARNING DISABILITIES Volume: 45   Issue: 5   Pages: 406-417   DOI: 10.1177/0022219411431242   Published: SEP-OCT 2012
This study, framed by the component model of reading (CMR), examined the relative importance of kindergarten-entry predictors of first grade reading performance. Specifically, elements within the ecological domain included dialect, maternal education, amount of preschool, and home literacy; elements within the psychological domain included teacher-reported academic competence, social skills, and behavior; and elements within the cognitive domain included initial vocabulary, phonological, and morpho-syntactic skills, and alphabetic and word recognition skills. Data were obtained for 224 culturally diverse kindergarteners (58% Black, 34% White, and 8% Hispanic or other; 58% received free or reduced-price lunch) from a larger study conducted in seven predominantly high poverty schools (n = 20 classrooms) in a midsized city school district in northern Florida. Results from a hierarchical multiple regression (with variables in the ecological domain entered first, followed by the psychological and cognitive domains) revealed a model that explained roughly 56% of the variance in first grade reading achievement, using fall-of-kindergarten predictors. Letter-word reading and morpho-syntactic skill were the strongest significant predictors. The findings largely support the CMR model as a means to understand individual differences in reading acquisition and, in turn, to support data-based instructional decisions for a wider range of children.

Pakarinen, E.a , Lerkkanen, M.-K.b , Poikkeus, A.-M.b , Siekkinen, M.c , Nurmi, J.-E.a

Kindergarten teachers adjust their teaching practices in accordance with children's academic pre-skills

Department of Psychology, University of Jyväskylä, Jyväskylä, Finland;
Department of Teacher Education, University of Jyväskylä, Jyväskylä, Finland;
Philosophical Faculty, School of Applied Educational Sciences and Teacher Education, University of Eastern Finland, Joensuu, Finland

This study examined the extent to which kindergarten children's academic pre-skills are associated with their teachers' subsequent teaching practices. The pre-skills in reading and math of 1268 children (655 boys, 613 girls) were measured in kindergarten in the fall. A pair of trained observers used the Classroom Assessment Scoring System instrument to observe 49 kindergarten teachers on their emotional support, classroom organisation and instructional support in kindergarten in the spring. The results of the multilevel modelling showed that low levels of academic pre-skills in kindergarten classrooms in the fall predicted high classroom quality in the classrooms later on. The results suggest that the overall level of children's academic pre-skills in the classroom plays an important role in the ways in which teachers adapt their instructional practices to the needs of a particular classroom.

Validity of the Bracken School Readiness Assessment for predicting first grade readiness
Panter, Janet E; Bracken, Bruce A
The Bracken School Readiness Assessment (BSRA) was administered to all kindergarten students enrolled in two rural elementary schools in the fall of 2004. Eight months later, the reading portion of the Metropolitan Readiness Tests, 6th Edition (MRT-6) was administered. Teachers were asked to indicate whether they had concerns about each student's readiness for first grade and whether students had been retained or referred for other assessment(s) or services. The BSRA was found to be a good predictor of children's readiness ratings, as well as their retention or referral for services. It also predicted performance on the MRT-6. This study partially validated the use of the BSRA as a screening measure to predict kindergarten performance and kindergarten teachers' ratings of first grade readiness.

Reading assessments in Kindergarten through third grade: Findings from the center for the improvement of early reading achievement
Paris, SG (Paris, SG); Hoffman, JV (Hoffman, JV)
Assessment of early reading development is important for all stakeholders. It can identify children who need special instruction and provide useful information to parents as well as summative accounts of early achievement in schools. Researchers at the Center for Improvement of Early Reading Achievement (CIERA) investigated early reading assessment in a variety of studies that employed diverse methods. One group of studies used survey methods to determine the kinds of assessments available to teachers and the teachers' reactions to the assessments. A second group of studies focused on teachers' use of informal reading inventories for formative and summative purposes. In a third group of studies, researchers designed innovative assessments of children's early reading, including narrative comprehension, adult-child interactive reading, the classroom environment, and instructional texts. The CIERA studies provide useful information about current reading assessments and identify promising new directions.

easyCBM[R] Slope Reliability: Letter Names, Word Reading Fluency, and Passage Reading Fluency. Technical Report #1111 (ED532320)

Author(s): Patarapichayatham, Chalie; Anderson, Daniel; Irvin, P. Shawn; Kamata, Akhito; Alonzo, Julie; Tindal, Gerald

Source: Behavioral Research and Teaching

Pub Date: 2011-12-00

Pub Type(s): Numerical/Quantitative Data; Reports - Evaluative

Abstract:
Within a response to intervention (RTI) framework, students are administered multiple tests of equivalent difficulty. Changes in students' scores over time are then attributed to changes in learning. In the current study, we evaluated the reliability of score changes (i.e., slope) for the easyCBM[R] letter names, word reading fluency, and passage reading fluency measures. Data came from a sample of convenience and included students taking at least three tests of one measure type during one academic year (up to 38 weeks). Data were organized into bi-weekly segments and a growth model for two parallel processes was conducted, with "A" weeks (2A, 3A, 4A, 5A, 6A, 7A, 8A, and 9A) in one process and "B" weeks (2B, 3B, 4B, 5B, 6B, 7B, 8B, and 9B) in the other. A linear growth model was conducted in each process and the individual slopes were estimated within the growth modeling framework. Then, the reliability of the slope was estimated as the correlation between individual slopes from the two parallel processes with a correction by the Spearman-Brown formula. Full-Text Availability Options:

Using Static and Dynamic Measures to Estimate Reading Difficulty for Hispanic Children (ED513582)

Author(s): Petersen, Douglas B.

Source: ProQuest LLC, Ph.D. Dissertation, Utah State University

Pub Date: 2010-00-00

Pub Type(s): Dissertations/Theses - Doctoral Dissertations

Abstract:
This study investigated the validity of measures that were hypothesized to account for significant variance in English reading ability. During kindergarten, 63 bilingual Hispanic children completed letter identification, English and Spanish phonological awareness, rapid automatized naming, and sentence repetition static assessment tasks. They also completed a dynamic assessment nonsense-word decoding task that yielded pretest to posttest gain score, response to decoding strategy, and temporally related working memory information. One week prior to kindergarten, information was gathered regarding socioeconomic status, preschool attendance, English and Spanish language dominance, and language ability. At the end of first grade, the same children completed word identification, decoding, and reading fluency tasks designed to represent the narrow view of reading. Reliability, content relevancy, construct validity, and predictive evidence of validity were examined. The letter identification task, the English-only and Spanish-only tasks, and a composite of the participants' best English and Spanish scores accounted for significant variance in first-grade word-level reading. However, the Spanish and BLS static measures did not account for significant, unique variance over and above English-only static measures, and the English-only static measures did not account for significant, unique variance over and above the letter identification static measure. The dynamic

assessment measure pertaining to the response to reading strategy instruction accounted for equivalent variance in first-grade word-level reading when compared to a combination of letter identification and BLS static measures. The dynamic assessment measure yielded the highest classification accuracy, with sensitivity and specificity at or above 80% for all three formative criterion reading measures, including 100% sensitivity for two out of the three first-grade measures. The dynamic assessment of reading strategy surfaced as a parsimonious, valid means of predicting first-grade word-level reading ability for Hispanic, bilingual children. When compared to multiple English, Spanish, and BLS static measures, the dynamic measure accounted for equivalent variance in the majority of first-grade reading measures and had superior classification accuracy. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Longitudinal genetic analysis of early reading: The Western Reserve Reading Project
Petrill, SA (Petrill, Stephen A.); Deater-Deckard, K (Deater-Deckard, Kirby); Thompson, LA (Thompson, Lee Anne); Schatschneider, C (Schatschneider, Chris); Dethorne, LS (Dethorne, Laura S.); Vandenbergh, DJ (Vandenbergh, David J.)
EADING AND WRITING Volume: 20 Issue: 1-2 Pages: 127-146 DOI: 10.1007/s11145-006-9021-2 Published: FEB 2007
We examined the genetic and environmental contribution to the stability and instability of reading outcomes in early elementary school using a sample of 283 twin pairs drawn from the Western Reserve Reading Project. Twins were assessed across two measurement occasions. In Wave 1, children were either in kindergarten or first grade. Wave 2 assessments were conducted one year later. Results suggested substantial genetic stability across measurement occasions. Additionally, shared environmental influences also accounted for stability, particularly for variables more closely tied to direct instruction such as phonological awareness, letter knowledge, and word knowledge. There was also evidence for independent genetic and shared environmental effects, suggesting that new sources of variance may emerge as the demands of school change and children begin to acquire early reading skills.

Predictive Validity of the Get Ready to Read! Screener
Phillips, BM (Phillips, Beth M.)[1]; Lonigan, CJ (Lonigan, Christopher J.); Wyatt, MA (Wyatt, Marcy A.)[2]
JOURNAL OF LEARNING DISABILITIES Volume: 42 Issue: 2 Pages: 133-147 DOI: 10.1177/0022219408326209 Published: MAR-APR 2009
This study examined concurrent and longitudinal relations for the Get Ready to Read! (GRTR) emergent literacy screener. This measure, within a battery of oral language, letter knowledge, decoding, and phonological awareness tests, was administered to 204 preschool children (mean age = 53.6, SD = 5.78; 55% male) from diverse socioeconomic backgrounds. Subgroups were reassessed at 6 months and 16 and 37 months later. Results indicate strong relations between the GRTR and the literacy and language assessments. Long-term follow-up indicated that the screener was significantly related to some reading-related measures, including decoding skills. These results support the utility of the GRTR as a brief, valid measure of children's emergent literacy skills. The GRTR holds promise as a tool useful for educators, parents, and others in regular contact with preschool children to help determine those who may be at risk for later reading difficulties and could benefit from intervention and focused instruction in emergent literacy.

The Effects of Classroom Placement on the Reading Achievement of Preschool Nonattenders in Kindergarten and First Grade.
Popwell, Emma Pace; 1988
A study examined the kindergarten placement decisions of elementary school principals and the extent to which the grouping patterns persisted into the first grade. Subjects, 555 nonpreschool attenders who were enrolled in kindergarten at 22 elementary schools, were randomly selected from each strata of low, medium, and high student eligibility for the subsidized school lunch program. The children were tested for reading readiness, mastery of basal reading skills, and reading achievement on a standardized norm-referenced test. The principals of the schools were interviewed concerning the methods used to assign new kindergarten students to classrooms. Results indicated that the criteria for initial assignment of new kindergarten pupils to classrooms were more related to organizational or managerial functions of resource allocation rather than to a systematic use of data to accommodate the broad range of pupils' out-of-school learning experiences. Results also indicated that the factors which contributed to the variability in reading achievement in kindergarten were, in order of importance: (1) successful completion of the prereading program; (2) initial readiness to begin the formal prereading program; (3) classroom composition in which the preschool nonattenders comprised the minority or equal proportion; and (4) the socio-economic status of the school. (Eight tables of data are included; the principal survey is attached.)

Preliminary Development of a Kindergarten School Readiness Assessment for Latino Students (EJ916015)

Author(s): Quirk, Matthew; Furlong, Michael; Lilles, Elena; Felix, Erika; Chin, Jenna

Abstract:
The low achievement of students from non-English-speaking households living in low socioeconomic contexts is associated with academic skill gaps evident at kindergarten entry. Yet, few cost-effective, valid instruments are available to assess these students' school readiness. To examine this topic, this longitudinal study followed 1,069 primarily Latino students (536 males, 553 females) in a midsized school district. Teachers used the Kindergarten Student Entrance Profile (KSEP) to rate students' school readiness at entry into kindergarten and measures of reading skills and of performance on state standardized assessments were collected through the end of Grade 2. Latent-variable path analysis examined whether students' school readiness ratings predicted midkindergraten phonological awareness and reading fluency at the end of Grades 1 and 2. KSEP scores significantly predicted midkindergarten phonological awareness (standardized path coefficient of 0.40) and end of Grade 1 reading fluency (standardized path coefficient of 0.17), beyond what was explained by midkindergarten phonological awareness skills. Additional analyses examined the practical implications of these findings. Students were placed into 5 categories on the basis of their total scores on the California Standards Test (CST) score (far below basic, below basic, basic, proficient, and advanced). Students who performed better on the CST assessment (English/language arts and mathematics) at the end of Grade 2 had significantly higher KSEP ratings at kindergarten entry than did students with lower CST scores. This collaborative research project provides an example of how a district-community-university partnership can lead

Rabiner, D.a h , Coie, J.D.b d , Bierman, K.L.c , Dodge, K.A.d , Greenberg, M.T.c ,
Lochman, J.E.e , McMahon, R.J.f , Pinderhughes, E.g
Early attention problems and children's reading achievement: A longitudinal investigation
(2000) Journal of the American Academy of Child and Adolescent Psychiatry, 39 (7), pp.
859-867.
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0033936339&partnerID=40&md5=ea26e2c7dbd5d60770077ecfc05c0354
Center for Child and Family Policy; Psychology Department, Duke University, Durham, NC,
United States; Penn State University; Duke University; University of Alabama, Tuscaloosa;
University of Washington at Seattle; Vanderbilt University, Durham, NC 27708-0539, United
States; Center for Child and Family Policy, Duke University, Box 90545, Durham, NC
27708-0539, United States
Objectives: To determine whether attention problems predict the development of reading
difficulties and examine whether screening for attention problems could be of practical value
in identifying children at risk for reading underachievement. Method: Three hundred eighty-
seven children were monitored from kindergarten through fifth grade. Standardized
assessments of attention problems and reading achievement were conducted at multiple
time points. Results: Attention problems predicted reading achievement even after
controlling for prior reading achievement, IQ, and other behavioral difficulties. Inattentive
first graders with normal reading scores after kindergarten were at risk for poor reading
outcomes. Conclusions: Attention problems play an important role in the development of
reading difficulties for some children, and screening for attention problems may help identify
children at risk for reading difficulties.

Ramey, C.T.a b c , Ramey, S.L.a b
Early learning and school readiness: Can early intervention make a difference?
(2004) Merrill-Palmer Quarterly, 50 (4), pp. 471-491.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
11144285031&partnerID=40&md5=a835ef6e264a7bdc8c1cb9e8d01383b8
Georgetown University, United States; Georgetown Univ. Ctr. Hlth./Educ., United States;
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Road, NW, Washington, DC 20057-1107, United States
Children's experiences prior to kindergarten entry are correlated with degree of cognitive
development and school readiness as measured by standardized assessments of cognitive
and linguistic performance. Children from economically poor and undereducated families
are at elevated risk for lack of school readiness due to less knowledge and skill. This article
reviews evidence from randomized controlled trials (RCTs) that were designed to test the
hypothesis that preschool education, with an emphasis on seven particular classes of
experiences, could be efficacious in improving readiness for school and subsequent
academic achievement in reading and mathematics. Results indicate that the cumulative
developmental toll that is measured reliably in high-risk samples of children beginning in the
second year of life can be substantially reduced through a high-quality preschool program.
This positive effect has been replicated in nine additional trials using RCT methodology.
Additionally, long-term follow-up of the original study participants indicates not only
improved performance in reading and mathematics in elementary and secondary school but
also a reduction in special education placement and grade retention, among other practical
benefits. Results are discussed with respect to public policy recommendations and
suggestions for future research.

[Kindergarten Readiness Skills: Predictors of Academic Potential](#)

Author(s):	Rawlings, Jennifer	Pub Date:	2011-00-00
Source:	ProQuest LLC, Ed.D. Dissertation, Tennessee State University	Pub Type(s):	Dissertations/Theses - Doctoral Dissertations

Abstract:

The purpose of this study was to determine the relationship between school readiness skills as measured by the Missouri KIDS and academic potential in reading and math as measured by the scores on the CTP4 in grades 2-4 in a private, independent school. This study identified which school readiness skills most accurately predict the need for learning services and if low-achieving students receiving learning services are no longer academically distinguishable from their classmates by fourth grade. This study focused on both correlational and causal-comparative research methodology utilizing archival data. The sample for this research study consisted of approximately 227 students who attended a private, independent school in grades K-4. The acquired data was analyzed and summarized through the use of descriptive statistics and frequency distributions. Five stepwise regressions and two MANOVAs were conducted to address the hypotheses. All seven of the null hypotheses presented for testing were found to have a statistically significant relationship and/or difference. A model including language concepts, auditory skills, and visual skills was found to be the greatest predictor of reading comprehension. For auditory comprehension, a model including visual skills and auditory skills was found to be the main predictor. The model including number concepts, visual skills, and auditory skills was found to aid in predicting verbal reasoning scores; whereas, the model including visual skills and number concepts facilitated for the prediction of both mathematics and quantitative reasoning. The results of the two MANOVAs indicated a statistically significant difference between the fourth grade students who received learning services and those students who did not. All seven null hypotheses were rejected at the 0.05 level of significance. These findings concluded that the Missouri KIDS has the ability to predict future achievement and to identify students who may benefit from learning services. Further research should be conducted that includes a larger sampling of students from other ethnic, cultural, and socio-economic backgrounds who have been assessed using the Missouri KIDS and to study other test instruments for their ability to predict academic potential. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Predicting behaviour and learning problems at school entry: examining the utility of a parent-, teacher-, and a child-based scale.
Reddington, J M; Wheeldon, A
Australian Educational and Developmental Psychologist vol. 26, no. 1 (2009); 2009
This exploratory study investigated the screening of behaviour, and auditory processing and reading problems in the first school year, employing a sample of 74 children from Queensland Australia from two primary schools, one low-socioeconomic, and the other upper socio-economic. A teacher behaviour risk index, which included (i) a Behaviour scale (internalising externalising dimensions and inattention), (ii) a teacher Future Risk estimation, was found to be reliable and a valid predictor of behaviour, together with a parent-based behaviour scale, against the Personal-Social Behaviour sub-scale of the Pupil Rating Scale-Revised. Adding the teacher-based Behaviour scale to the child-based Performance Indicators in the Primary School (PIPS) did not assist reading assessment however the

PIPS scale was confirmed as a valid reading predictor. A teacher-based Central Auditory Processing Disorder (CAPD) scale was significantly correlated to teacher-based Inattention and Behaviour and, with the teacher-based Behaviour scale, significantly predicted reading. On its own it predicted reading better than phonological awareness. It was suggested that child behaviour, CAPD and reading profiles could facilitate joint parent-teacher at-risk referrals in Year 1, including mental health. Assistive listening devices were recommended to aid children's auditory processing. The study needs replication with larger samples.

Using assessment information to inform evidence-based teaching
Rodwell, Michelle; Sale, Catheryn
Practically Primary vol. 16, no. 1 (Feb 2011)
Teachers are increasingly focused on collecting and analysing assessment information to inform evidence-based teaching. The Literacy Engagement Assessment Process (LEAP) was implemented in two Kindergarten classrooms over twelve months. The aim was to enhance teacher capacity to analyse and use assessment information to inform their literacy teaching in Kindergarten (the first year of school). LEAP as an Assessment Process LEAP is built on the premise that observation and assessment of children's language and literacy development over time can broaden a teacher's knowledge about individual students. Further, it allows for the planning and implementation of effective literacy teaching inclusive of evidence based decisions about teaching instruction. This article explores the approach taken by two Kindergarten teachers, a Reading Recovery Tutor and Literacy Education officer in a NSW school in the Illawarra region, approximately 60km South of Sydney. The Kindergarten teachers made daily observations of the students as they worked in small literacy groups and in daily guided reading and writing. Coupled with these was a process of assessment. The results of these item based assessments were not considered in isolation, but were combined in order to provide a more holistic picture of the child's abilities. They were used in an effort to use a flexible approach to assessing literacy learning and to inform classroom teaching.

The effectiveness of classroom-based instructional assessments for progress monitoring purposes in Texas Reading First schools
Romain, Melissa[1]; Millner, Keith[2]; Moss, Victoria[3]; Held, Marguerite[4]
Reading and Writing, Volume 20, Number 6, August 2007 , pp. 619-641(23)
The purpose of this article was twofold. First, the assessment materials from four core reading programs were informally reviewed for their adherence to Texas Reading First progress monitoring guidelines for kindergarten and the beginning of Grade 1. Conclusions support existing concerns regarding the variability in the quality and quantity of assessment materials within and across programs as well as concerns about whether the materials lend themselves to progress monitoring purposes at 2-week intervals for students who are struggling readers. Second, recommendations are made for the development of progress monitoring tools that are concise, easy for teachers to use, and that provide clear guidelines regarding the use of progress monitoring data to drive instruction. Accordingly the recent development of a progress monitoring tool that parallels the Texas Primary Reading Inventory (TPRI), which is an assessment tool used in approximately 95% of Texas Reading First schools was discussed.
DOI: http://dx.doi.org/10.1007/s11145-007-9057-y

Validity of the dynamic indicators for basic early literacy skills as an indicator of early literacy for urban kindergarten children
Rouse, HL (Rouse, Heather L.); Fantuzzo, JW (Fantuzzo, John W.)
SCHOOL PSYCHOLOGY REVIEW Volume: 35   Issue: 3   Pages: 341-355   Published: 2006
The validity of three subtests of the Dynamic Indicators for Basic Early Literacy Skills (DIBELS) was investigated for kindergarten children in a large urban school district. A

stratified, random sample of 330 participants was drawn from an entire cohort of kindergarten children. Letter Naming Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency evidenced significant concurrent and predictive validity when compared to general reading ability measured by teacher report, individual assessments, and group-administered nationally standardized tests. Evidence for convergent and discriminant validity was also found when comparing these subtests to measures of specific literacy, cognitive, and social-behavioral constructs.

Genetic and environmental influences on prereading skills and early reading and spelling development in the United States, Australia, and Scandinavia
Samuelsson, S (Samuelsson, Stefan); Olson, R (Olson, Richard); Wadsworth, S (Wadsworth, Sally); Corley, R (Corley, Robin); DeFries, JC (DeFries, John C.); Willcutt, E (Willcutt, Erik); Hulslander, J (Hulslander, Jacqueline); Byrne, B (Byrne, Brian)
READING AND WRITING Volume: 20   Issue: 1-2   Pages: 51-75   DOI: 10.1007/s11145-006-9018-x   Published: FEB 2007
Genetic and environmental influences on prereading skills in preschool and on early reading and spelling development at the end of kindergarten were compared among samples of identical and fraternal twins from the U.S. (Colorado), Australia, and Scandinavia. Mean comparisons revealed significantly lower preschool print knowledge in Scandinavia, consistent with the relatively lower amount of shared book reading and letter-based activities with parents, and lack of emphasis on print knowledge in Scandinavian preschools. The patterns of correlations between all preschool environment measures and prereading skills within the samples were remarkably similar, as were the patterns of genetic, shared environment, and non-shared environment estimates: in all samples, genetic influence was substantial and shared environment influence was relatively weak for phonological awareness, rapid naming, and verbal memory; genetic influence was weak, and shared environment influence was relatively strong for vocabulary and print knowledge. In contrast, for reading and spelling assessed at the end of kindergarten in the Australian and U.S. samples, there was some preliminary evidence for country differences in the magnitude of genetic and environmental influences. We argue that the apparently higher genetic and lower shared environment influence in the Australian sample was related to a greater emphasis on formal reading instruction, resulting in more advanced reading and spelling skills at the end of kindergarten, and thus there was greater opportunity to observe genetic influences on response to systematic reading instruction among the Australian twins.

The Timing of Early Reading Assessment in Kindergarten
Santi, Kristi L.; York, Mary; Foorman, Barbara R.; Francis, David J.
Learning Disability Quarterly vol. 32, no. 4 (2009), p. 217-227; 2009
Under the accountability provisions of the No Child Left Behind legislation, screening for reading risk has become routine in kindergarten. The objective of this study was to examine the effects of the timing of kindergarten assessment and the type of support provided to teachers to translate assessment results to instruction. Sixty-two schools with 201 kindergarten classrooms and 3,635 students in a southwestern state were randomly assigned to administer kindergarten assessment in the fall or in the winter, with teachers receiving onsite or web mentoring. A small, significant effect (d = 0.13) was found for outcomes on a standardized reading test administered at the end of kindergarten when teachers administered the screen in the fall and received web rather than onsite mentoring. A slight, nonsignificant, reduction in reading risk (i.e., reduction in false positives) was apparent. Given these small effects, there is little empirical support for initiating screening in the fall rather than in the winter of kindergarten.

The role of scaffolding errors in reading development: Evidence from a longitudinal and a correlational study

Background. Identification of patterns of early reading behaviour that predict later reading success is clearly important. Reading errors of 6-year-olds represent a source of such early assessment information, but their significance as predictors of later reading is unknown. Aims. The relationship between word reading errors at age 6 and accurate word reading at age 8 is investigated here.
Samples, Methods, Results. In study 1, 44 children completed word reading tests at 6 and 8 years. 'Scaffolding errors' preserving both initial and final phonemes (e.g.,'bark' misread as 'bank'); errors preserving either initial or final phonemes (e.g.,'bark' misread as 'bed' or 'like'); distant or unrelated errors (e.g.,'bark' misread as 'can' or 'men') and non-responses were measured at age 6. Scaffolding errors were the best predictors of word reading at age 8. Study 2 investigated the correlations between word and nonsense word reading, and scaffolding errors in 30 children aged 6 years. Scaffolding errors predicted unique variance in word reading after nonword reading was entered.
Conclusions. Scaffolding errors represent a significant qualitative indicator of later word reading success. Implications of findings for early identification of reading difficulties, and facilitating reading interventions are discussed.

Kindergarten prediction of reading skills: A longitudinal comparative analysis
There is considerable focus in public policy on screening children for reading difficulties. Sixty years of research have not resolved questions of what constructs assessed in kindergarten best predict subsequent reading outcomes. This study assessed the relative importance of multiple measures obtained in a kindergarten sample for the prediction of reading outcomes at the end of 1st and 2nd grades. Analyses revealed that measures of phonological awareness, letter sound knowledge, and naming speed consistently accounted for the unique variance across reading outcomes whereas measures of perceptual skills and oral language and vocabulary did not. These results show that measures of letter name and letter sound knowledge, naming speed, and phonological awareness are good predictors of multiple reading outcomes in Grades 1 and 2.

Relationship between pre-intervention data and post-intervention reading fluency and growth: A meta-analysis of assessment data for individual students
Curriculum-based measurement is commonly used within a response-to-intervention framework to assess the effectiveness of intervention and to triage students into intervention tiers (e.g., the lowest 10% receive a Tier 3 intervention, and those in the 11th to 25th percentiles receive a Tier 2 intervention). We conducted a meta-analysis of 18 studies to examine the relationship between pre-intervention assessments and post-intervention level and growth in reading fluency. The results indicated that several pre-intervention measures were moderately related to post-intervention fluency, but only a percentage of comprehension questions answered during baseline assessments, reading fluency age or grade-based standard scores (SS), and word attack SS resulted in even a small to moderate relationship with reading growth. Moreover, there was no significant difference between the correlation of any two pre-intervention measures with reading growth, which suggested that all of the measures were equally poorly related to reading growth. Implications for research and practice are discussed.

Indexing Response to Intervention A Longitudinal Study of Reading Risk From Kindergarten Through Third Grade

Simmons, DC (Simmons, Deborah C.)[1]; Coyne, MD (Coyne, Michael D.)[2]; Kwok, OM (Kwok, Oi-man); McDonagh, S (McDonagh, Sarah)[3]; Harn, BA (Harn, Beth A.); Kame'enui, EJ (Kame'enui, Edward J.)[4]

In this study, response to intervention and stability of reading performance of 41 kindergarten children identified as at risk of reading difficulty were evaluated from kindergarten through third grade. All students were assessed in the fall of each academic year to evaluate need for intervention, and students who fell below the 30th percentile on criterion measures received small-group supplemental intervention. Measures included a combination of commercial normative referenced measures and specific skill and construct measures to assess growth or change in reading risk status relative to 30th percentile benchmarks. Results indicated that consistent with the findings of prior research involving students with comparable entry-level performance, the majority of children identified as at risk in the beginning of kindergarten responded early and positively to intervention. On average, absolute performance levels at the end of kindergarten positioned students for trajectories of later reading performance that exceeded the 50th percentile on the majority of measures. Moreover, changes in risk status that occurred early were generally sustained over time. Only oral reading fluency performance failed to exceed the 30th percentile for the majority of students

Reception class predictors of literacy skills

Simpson, J (Simpson, J); Everatt, J (Everatt, J)

Background. In the last decade, there has been a growing interest, both in the UK and abroad, in developing early screening tests for dyslexia that can be used with very young children. In addition to measures of literacy achievement, such screening tests typically aim to identify underlying difficulties, such as phonological deficits, that might hinder a child's educational progress. The Dyslexia Early Screening Test (DEST; Nicolson & Fawcett, 1996) is an example of such a test that combines attainment and diagnostic indicators.

Aim. The study reported assessed the ability of the DEST to predict future literacy skills in contrast with the prediction afforded by school-based measures, such as letter knowledge.

Sample. Participants were 45 boys attending a reception class, with a mean age of 4.87 years at the start of the study and 6.63 years at the end.

Methods. Measures of literacy skills, phonological awareness, verbal memory, motor skill, and auditory processing were assessed using the DEST as the initial screening tool at Phase 1. Measures of letter knowledge, non-word reading, and rhyme judgment were taken at Phase 2. Phase 3 measures, 14 months after the start of the study, comprised single-word reading and spelling. At Phase 4, some 22 months after the beginning of the study, measures of reading and spelling ability were assessed again.

Results. Individual subtests of the DEST were more predictive of later literacy skills than the global screening test's score (the 'at risk quotient'). Better predictors were the DEST subtest of sound order and rapid automatized naming, together with the school attainment measure of letter knowledge.

Conclusions. Although some DEST subtests did offer predictors of future literacy skills, school-based measures of letter knowledge may be equally valid as assessment measures. Additionally, the results question the usefulness of combining measures to form an 'at risk' index of future literacy difficulties, particularly in the age range assessed.

Literacy Growth in the Academic Year versus Summer from Preschool through Second Grade: Differential Effects of Schooling across Four Skills (EJ959149)

Abstract:
Differences in literacy growth over the summer versus the school year were examined to isolate how schooling affects children's literacy development from preschool through second grade across four literacy skills. Children (n = 383) were tested individually twice each year for up to 4 years on measures of phonological awareness, decoding, reading comprehension, and vocabulary. Growth curve analyses indicated that schooling effects were greatest for decoding skills and reading comprehension, were medium in size for phonological awareness, and were less evident for vocabulary. Except for vocabulary, relatively small amounts of growth were observed for preschoolers, followed by a period of rapid growth for kindergarteners and first graders, which slowed again for second graders. Findings demonstrate the differential effect of schooling on four separate literacy skills during the crucial school transition period.

Smees, P.S.R.
Measuring pupil progress at Key Stage 1: Using baseline assessment to investigate value added
(1998) School Leadership and Management, 18 (3), pp. 389-407.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0038299351&partnerID=40&md5=38d4ad04c406e1d873cc8bb75382cc9b
This paper presents results from an LEA-commissioned value-added project conducted with 107 primary schools in Surrey. The project was designed to explore the use of baseline assessment at entry to reception classes to measure pupil progress across Key Stage 1 (KS1). Pupil performance in KS1 assessments of the core curriculum areas English (reading and writing), mathematics and science were analysed. The results of multi-level analyses, the impact of pupil background factors, the feedback of results to schools and the way Surrey Education Service and schools are using the information in school improvement activities are described.

Identification of Reading Problems in First Grade Within a Response-To-Intervention Framework
Speece, DL (Speece, Deborah L.)[1]; Schatschneider, C (Schatschneider, Christopher)[2,3]; Silverman, R (Silverman, Rebecca)[1]; Case, LP (Case, Lisa Pericola)[1]; Cooper, DH (Cooper, David H.)[4]; Jacobs, DM (Jacobs, Dawn M.)[1]
ELEMENTARY SCHOOL JOURNAL Volume: 111 Issue: 4 Special Issue: SI Pages: 585-607 Published: JUN 2011
Models of Response to Intervention (RTI) include parameters of assessment and instruction. This study focuses on assessment with the purpose of developing a screening battery that validly and efficiently identifies first-grade children at risk for reading problems. In an RTI model, these children would be candidates for early intervention. We examined accuracy, fluency, growth, and teacher rating measures as predictors of child status (at risk, not at risk) at the end of the school year based on an unselected sample of 243 children. The prediction model that best fit our selection criteria included 2 word-fluency measures

and a teacher rating of reading problems. Word-fluency growth was an equally plausible choice statistically, but, because the measure would require an additional data point, it was not the most efficient choice. The receiver-operator characteristic curve analysis yielded an area-under-the-curve index of .96, which indicates the selected 3-variable model is highly accurate.

Assessment And Decision-Making In Schools - A Cross-Site Analysis
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Case study research was conducted to elucidate how the oft-cited observation that assessment drives instruction plays out for particular individuals within particular schools. Because the influence of assessment on instruction might be subtle, e.g., textbook selection discussions might be influenced by the content of particular tests, the work was situated within the decision-making structure of the school and district. Findings suggest that the relationship between assessment and instruction is more complex than the debate about whether one does or should drive the other. Rather, issues of assessment and instruction are embedded within broader power structures within our schools; both are influenced greatly by the decision-making model operating in a given district. Only assessment-as-test proved to drive instruction and then only in districts in which teachers held little curricular authority. Should this finding hold across other sites in other settings, it suggests that two current reform efforts-better tests and greater reliance on school-based management-may be incompatible.

Strand, S.
Ethnic group, sex and economic disadvantage: Associations with pupils' educational progress from Baseline to the end of key stage 1
Very few studies have explored the associations between ethnic group, sex, economic disadvantage and school attended on pupils' progress during their earliest years at school (age 4-7). The present study reports an analysis of the educational progress made by over 5000 pupils between Baseline assessment at age 4 and national end of Key Stage 1 (KS1) tests at age 7. There were marked differences in pupil attainment associated with ethnic group, sex and economic disadvantage, both at Baseline and at the end of KS1. In general, differences between groups of pupils tended to increase rather than decrease over time. Pupils entitled to free school meals (FSM) made less progress in all subjects than pupils not entitled to FSM, girls made more progress than boys in reading and writing but less progress in mathematics and Caribbean pupils made less progress, and Chinese pupils more progress, than English, Scottish, Welsh and Northern Irish (ESWNI) pupils. There were, however, significant interactions between the pupil factors. Caribbean and Black Other boys, African and Caribbean pupils with high Baseline attainment and ESWNI pupils entitled to FSM all made less than expected progress. The results confirm previous research indicating the particular primary school a pupil attends has a significant effect on their progress during the early years. However, there was no evidence of significant differential school effectiveness in relation to ethnic group, sex or economic disadvantage. Thus, the same schools that were most effective for either ESWNI, girls, or economically advantaged pupils were also most effective for either Caribbean, boys, or economically disadvantaged pupils.

IQ Is Not Strongly Related to Response to Reading Instruction: A Meta-Analytic Interpretation

Stuebing, KK (Stuebing, Karla K.)[1,3]; Barth, AE (Barth, Amy E.)[1,3]; Molfese, PJ (Molfese, Peter J.)[1,2]; Weiss, B (Weiss, Brandon)[4]; Fletcher, JM (Fletcher, Jack M.)[1,2]

A meta-analysis of 22 studies evaluating the relation of different assessments of IQ and intervention response did not support the hypothesis that IQ is an important predictor of response to instruction. We found an $R(2)$ of .03 in models with IQ and the autoregressor as predictors and a unique lower estimated $R(2)$ of .006 and a higher estimated $R(2)$ of .013 in models with IQ, the autoregressor and additional covariates as predictors. There was no evidence that these aggregated effect sizes were moderated by variables such as the type of IQ measure, outcome, age, or intervention. In simulations of the capacity of variables with effect sizes of .03 and .001 for predicting response to intervention, we found little evidence of practical significance.

Susana, P., Sideridis, G.D.
Discriminant Validation of the Test of Reading Performance (TORP) for Identifying Children at Risk of Reading Difficulties
(2000) European Journal of Psychological Assessment, 16 (2), pp. 139-146.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0034382283&partnerID=40&md5=f4332918f0890f519077cfd318a51cac
Dept. of Psychology, City Literal Studies, 13 Tsimiski Str., GR-Thessaloniki 54624, Greece
This study investigated the discriminant validation of the Test of Reading Performance (TORP), a new scale designed to evaluate the reading performance of elementary-school students. The sample consisted of 181 elementary-school students drawn from public elementary schools in northern Greece using stratified random procedures. The TORP was hypothesized to measure six constructs, namely: "letter knowledge," "phoneme blending," "word identification," "syntax," "morphology," and "passage comprehension." Using standard deviations (SD) from the mean, three groups of students were formed as follows: A group of low achievers in reading (N = 9) including students who scored, between -1 and -1.5 SD from the mean of the group. A group of students at risk of reading difficulties (N = 6) including students who scored between -1.5 and -2 SDs below the mean of the group. A group of students at risk of serious reading difficulties (N = 6) including students who scored -2 or more SDs below the mean of the group. The rest of the students (no risk, N = 122) comprised the fourth group. Using discriminant analyses it was evaluated how well the linear combination of the 15 variables that comprised the TORP could discriminate students of different reading ability. Results indicated that correct classification rates for low achievers, those at risk for reading problems, those at risk of serious reading problems, and the no-risk group were 89%, 100%, 83%, and 97%, respectively. Evidence for partial validation of the TORP was provided through the use of confirmatory factor analysis and indices of sensitivity and specificity. It is concluded that the TORP can be utilized for the identification of children at risk for low achievement in reading. Analysis of the misclassified cases indicated that increased variability might have been responsible for the existing misclassification. More research is needed to determine the discriminant validation of TORP with samples of children with specific reading disabilities.

Teisl, J.T., Mazzocco, M.M.M., Myers, G.F.
The utility of kindergarten teacher ratings for predicting low academic achievement in first grade
(2001) Journal of Learning Disabilities, 34 (3), pp. 286-293.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0347240680&partnerID=40&md5=ba2d07d7a703ac91d51005596f099404
The purpose of this study was to assess the predictive value of kindergarten teachers' ratings of pupils for later first-grade academic achievement. Kindergarten students were

rated by their teachers on a variety of variables, including math and reading performance, teacher concerns, and amount of learning relative to peers. These variables were then analyzed with respect to outcome measures for math and reading ability administered in the first grade. The teachers' ratings of academic performance were significantly correlated with scores on the outcome measures. Analyses were also carried out to determine sensitivity, specificity, and predictive values of the different teacher ratings. The results indicated high overall accuracy, sensitivity, specificity, and negative predictive value for the ratings. Positive predictive value tended to be lower. A recommendation to follow from these results is that teacher ratings of this sort be used to determine which children should receive cognitive screening measures to further enhance identification of children at risk for learning disability. However, this recommendation is limited by the lack of empirically supported screening measures for math disability versus well-supported screening tools for reading disability.

Building literacy in alphabetic, abjad and morphosyllabic systems
Tolchinsky, L (Tolchinsky, Liliana)[1]; Levin, I (Levin, Iris)[2]; Aram, D (Aram, Dorit)[2]; McBride-Chang, C (McBride-Chang, Catherine)[3]
READING AND WRITING Volume: 25 Issue: 7 Pages: 1573-1598 DOI: 10.1007/s11145-011-9334-7 Published: AUG 2012
Preschoolers' metalinguistic and visual capabilities may be associated with the writing system of their culture. We examined patterns of performance in phonological awareness, naming of letters, morphological awareness, and visual-spatial relations, in 5-year-old native speakers of Spanish (n = 43), Hebrew (n = 40), and Cantonese (n = 63) and the relations of these literacy related skills to concurrent word writing and word reading. The writing systems in these languages represent three major categories, i.e., alphabetic (Spanish), abjad (Hebrew), and morphosyllabic (Chinese). Phonological awareness, letter naming, and perception of visual-spatial relations differed across groups, whereas morphological awareness showed a similar level of attainment in all three languages. Stepwise regression analyses explaining writing and reading for each language separately revealed both commonalities and differences between languages. Phonological awareness assessed by initial syllable deletion contributed to writing and to reading in Cantonese and in Spanish. Phonological awareness assessed by final phoneme isolation explained reading in Hebrew, whereas final and initial phoneme isolation explained writing in Hebrew. Letter naming predicted both writing and reading in Spanish and in Hebrew, while perception of visual-spatial relations did so in Cantonese. At age 5, children's metalinguistic knowledge and visual discrimination abilities are already attuned to the particular features of the writing system to which they are exposed.

The first seven years at school
Tymms, P (Tymms, Peter)[1]; Jones, P (Jones, Paul)[1]; Albone, S (Albone, Stephen)[1]; Henderson, B (Henderson, Brian)[1]
EDUCATIONAL ASSESSMENT EVALUATION AND ACCOUNTABILITY Volume: 21 Issue: 1 Pages: 67-80 DOI: 10.1007/s11092-008-9066-7 Published: FEB 2009
This paper assesses the cumulative long-term impact of successive years of high quality provision in schools. This was achieved by looking at the consequences, up to the age of 11 (Year 6), of attending a school where there was high or low value-added in each of the 7 years of primary education in England. Multi-level models for thousands of pupils were set up in which the relative contribution of the school was estimated each year, as was the impact of attainment levels reached in each previous year. The analyses indicated that: relative progress each year was important but progress in the earliest years was the most important. Good progress in the first year at school was still detectable in the last year of primary schooling. Boosts or setbacks to progress in one year can be added or subtracted to progress in another. The relative importance of school for maths and reading were similar but smaller for vocabulary. The analyses suggest that teachers are of key importance when

considering educational effectiveness and the implication for policy makers and school effectiveness researchers are discussed.

Effects of supplemental early reading intervention at 2-year follow up: Reading skill growth patterns and predictors
Vadasy, PF (Vadasy, Patricia F.)[1]; Sanders, EA (Sanders, Elizabeth A.)[1]; Abbott, RD (Abbott, Robert D.)[2]
SCIENTIFIC STUDIES OF READING Volume: 12   Issue: 1   Pages: 51-89   DOI: 10.1080/10888430701746906   Published: JAN-MAR 2008
This study examined the long-term growth of reading skills following 1 year of supplemental 1st-grade code-oriented intervention provided by paraeducators. A group of 79 1st graders with reading skills averaging in the lowest quartile received explicit alphabetic and decoding instruction and were assessed postintervention and at 1-year intervals through the end of 3rd grade. Growth model results indicate that students continued to benefit from 1st-grade intervention through the end of 3rd grade, with average performance near 50th percentile on decoding and reading fluency, near 40th percentile on word reading and comprehension, and near 30th percentile on spelling. Without exception, both receptive language and rapid automatized naming uniquely predicted 3rd-grade outcomes. Of the students remaining in study in fall of 2nd grade, a subgroup selected by their teachers received additional supplemental instruction. Students referred for added intervention continued to perform significantly lower than those more readily remediated with 1st-grade intervention alone.

Full-Day, Half-Day, and No Preschool Effects on Urban Children's First-Grade Reading Achievement
Valenti, JE (Valenti, Joy E.)[1]; Tracey, DH (Tracey, Diane H.)[1]
EDUCATION AND URBAN SOCIETY Volume: 41   Issue: 6   Pages: 695-711   DOI: 10.1177/0013124509336060   Published: SEP 2009
This study examined the relationships between students' attendance at full-day, half-day, or no preschool and first grade reading achievement. 214 urban, low SES public first grade students of mixed ethnicities were studied. Using the students' Developmental Reading Assessment (DRA2) scores (Beaver, 2006), results indicated that by the middle of first grade students who completed one year of full-day preschool significantly outperformed students who did not attend preschool. Students who completed one year of full-day preschool also outperformed students who completed half-day preschool, although not to a significant degree. Additionally, students who completed half-day preschool outperformed students who did not attend preschool, although not to a significant degree. The results further showed that significant differences between the groups were not apparent at the start of first grade, demonstrating that preschool attendance may not show immediate, positive benefits.

A multi-year evaluation of the effects of a Response to Intervention (RTI) model on identification of children for special education
VanDerHeyden, AM (VanDerHeyden, Amanda M.); Witt, JC (Witt, Joseph C.); Gilbertson, D (Gilbertson, Donna)
JOURNAL OF SCHOOL PSYCHOLOGY Volume: 45   Issue: 2   Pages: 225-256 DOI: 10.1016/j.jsp.2006.11.004
APR 2007
The purpose of this study was to examine the effects of implementation of a systematic response to intervention (RTI) model on the identification and evaluation of children for special education. Using a multiple baseline design, a systematic model of assessment and intervention was introduced in consecutive years for all elementary schools (N=5) in the district. Effect of the RTI model on number of evaluations conducted, percentage of evaluated children who qualified for services, and proportion of identified children by sex and ethnicity before and after implementation of the model was examined. Additionally,

outcomes for children who did not have an adequate response to intervention versus those who were at-risk but responded successfully to short-term intervention were examined. A cost analysis of use of the model was provided. The degree to which data obtained were used by the decision-making team was also examined. The assessment and intervention procedures, decision rules, and schoolwide training methods are described in detail and practical implications are discussed.

Response to intervention as a vehicle for distinguishing between children with and without reading disabilities: Evidence for the role of kindergarten and first-grade interventions
Vellutino, FR (Vellutino, FR); Scanlon, DM (Scanlon, DM); Small, S (Small, S); Fanuele, DP (Fanuele, DP)
JOURNAL OF LEARNING DISABILITIES Volume: 39 Issue: 2 Pages: 157-169 DOI: 10.1177/00222194060390020401   Published: MAR-APR 2006
Children at risk for early reading difficulties were identified on entry into kindergarten, and half of these children received small-group intervention two to three times a week during their kindergarten year. The other half received whatever remedial assistance was offered by their home schools. These children were again assessed at the beginning of first grade, and those who continued to have difficulties in reading received either one-to-one daily tutoring offered by project teachers from the beginning to the end of first grade or whatever remedial assistance was offered by their home schools over the same time period. All target children were periodically assessed through the end of third grade. Results suggest that either kindergarten intervention alone or kindergarten intervention combined with first-grade intervention are both useful vehicles for preventing early and long-term reading difficulties in most at-risk children.

Components of reading ability: Multivariate evidence for a convergent skills model of reading development
Vellutino, FR (Vellutino, Frank R.); Tunmer, WE (Tunmer, William E.); Jaccard, JJ (Jaccard, James J.); Chen, RS (Chen, RuSan)
SCIENTIFIC STUDIES OF READING Volume: 11 Issue: 1 Pages: 3-32 DOI: 10.1207/s1532799xssr1101_2 Published: 2007

Elementary and middle school children were given a large battery of tests evaluating reading subskills and reading-related cognitive abilities. These measures were used to define latent constructs representing skills and abilities believed to be important components of reading comprehension. Hypothesized relationships among these constructs were specified within the context of a structural model we call the "Convergent Skills Model of Reading Development," and developmental differences in the relative contribution made by each construct to reading comprehension performance were assessed through confirmatory factor analysis using the LISREL and AMOS programs. Results provide qualified support for the model and were interpreted as consistent with the major premises of both Gough and Tunmer's (1986) "Simple View" and Sticht's (1979) "Audread" models of reading.

Using response to kindergarten and first grade intervention to identify children at-risk for long-term reading difficulties
Vellutino, FR (Vellutino, Frank R.)[1]; Scanlon, DM (Scanlon, Donna M.)[1]; Zhang, HY (Zhang, Haiyan)[1]; Schatschneider, C (Schatschneider, Christopher)[2]
READING AND WRITING Volume: 21 Issue: 4 Pages: 437-480 DOI: 10.1007/s11145-007-9098-2 Published: JUN 2008
Entry-level kindergartners in classrooms from five middle class school districts were given a test of letter identification and children who scored at or below the 30th percentile on the test were classified as "at risk" for early reading difficulties. Half of these children were randomly assigned to a project-based intervention condition where they received supplementary intervention in small groups until the end of their kindergarten year. The

other half received whatever remedial services were available at their home schools and literacy skills development in both groups was tracked throughout kindergarten. All available at-risk children were again assessed at the beginning of first grade and dichotomized into a "continued-risk" group and a "no-longer-at-risk" group using a composite measure of basic word level skills. Normal reader controls were also identified using the same measure. Children in the continued-risk group received either project-based intervention (one-to-one tutoring 30 min daily) or school-based intervention throughout first grade. Intervention for project treatment children was discontinued at the end of first grade and literacy development in all groups was tracked until the end of third grade. The present study focused on literacy development in children who received only project-based kindergarten intervention or both (project-based) kindergarten and first grade intervention, relative to the normal reader controls. Of special interest was the question of whether measures of response to intervention would more effectively distinguish between continued-risk and no-longer-at-risk children than would kindergarten screening measures, measures of intelligence, or measures of reading-related cognitive abilities. Results indicated that the RTI measures more effectively and more consistently distinguished between these two groups than did the psychometric measures.

Wang, S.a b , Jiao, H.a , Young, M.J.a , Brooks, T.a , Olson, J.a
Comparability of computer-based and paper-and-pencil testing in K-12 reading assessments: A meta-analysis of testing mode effects
(2008) Educational and Psychological Measurement, 68 (1), pp. 5-24.
http://www.scopus.com/inward/record.url?eid=2-s2.0-37649020581&partnerID=40&md5=88f7315288d1c302f8cd883a8d6a7464
Harcourt Assessment, Inc.;
Psychometrics and Research Services, Harcourt Assessment, Inc., 19500 Bulverde Road, San Antonio, TX 78259, United States
In recent years, computer-based testing (CBT) has grown in popularity, is increasingly being implemented across the United States, and will likely become the primary mode for delivering tests in the future. Although CBT offers many advantages over traditional paper-and-pencil testing, assessment experts, researchers, practitioners, and users have expressed concern about the comparability of scores between the two test administration modes. To help provide an answer to this issue, a meta-analysis was conducted to synthesize the administration mode effects of CBTs and paper-and-pencil tests on K-12 student reading assessments. Findings indicate that the administration mode had no statistically significant effect on K-12 student reading achievement scores. Four moderator variables-study design, sample size, computer delivery algorithm, and computer practice-made statistically significant contributions to predicting effect size. Three moderator variables-grade level, type of test, and computer delivery method-did not affect the differences in reading scores between test modes.

A Content Analysis of Kindergarten Reading Curricula in Thirteen Large American Cities.
Wilson, Susan I.; 1976
After a review of the research related to the feasibility of initiating reading instruction before first grade, kindergarten curriculum guides from l3 large cities were studied and analyzed. These analyses indicated a trend toward less postponement of reading instruction, though reading readiness still tended to be defined in terms of oral language skills rather than in terms of visual skills. Most cities evaluated student progress through informal teacher assessment rather than through formal testing of specific skills. Individual and small-group instruction was stressed, although easy-to-read books and writing supplies for pupils were rarely mentioned. Only one of the 13 guides mentioned the need to adjust subsequent instruction to advances made during the kindergarten program.

Curriculum-Based Measures, Teachers Ratings, And Group Achievement Scores - Alternative Screening Measures

WILSON, MS (WILSON, MS); SCHENDEL, JM (SCHENDEL, JM); ULMAN, JE (ULMAN, JE)

This study found several nontraditional assessment tools to be good predictors of current reading instruction group for nonhandicapped and mildly handicapped children. Iowa Tests of Basic Skills (ITBS) reading scores, curriculum-based measurement (CBM) reading probes, and a teacher's rating scale (TRAP-R) were able to stratify a large sample of children of elementary school age into Chapter 1, Resource Teaching Program (RTP), or regular education reading groups with 76% accuracy. These results are consistent with prior research with this instrument. These three tools appear to have utility as alternative screening or assessment measures for children in need of special and remedial services. The CBM scores varied by curriculum; therefore local norms would be necessary to make meaningful comparisons. CBM probes, ITBS scores, and teachers' ratings were found to be reliable measures of students' need for special reading instruction, as measured by present instructional placement; these measures can be easily obtained and may alleviate the need for some more traditional psychoeducational assessment.

Accessible Reading Assessments for Students with Disabilities: Summary and Conclusions
Author(s): Wise, LL (Wise, Lauress L.)

The articles in this special issue make two important contributions to our understanding of the impact of accommodations on test score validity. First, they illustrate a variety of methods for collection and rigorous analyses of empirical data that can supplant expert judgment of the impact of accommodations. These methods range from internal analyses of reliability, differential item functioning, and factor structure to different ways for comparing score means from accommodated and non-accommodated assessments and ways of incorporating external criteria in assessing changes in validity. Equally important, these articles add significantly to our knowledge of the impact of specific reading accommodations for varying groups of students with disabilities. The accommodations reported included large print and Braille tests for blind and visually impaired students, segmented text for students with specific learning disabilities, and audio presentation of text for students with a variety of disabilities. The results reported are mixed, indicating some support for the validity of scores from accommodated assessments and also raising some questions for further exploration. Further meta-analytic studies are needed to sort out often conflicting results within and across different studies of reading accommodations.

Wood, FB (Wood, FB); Hill, DF (Hill, DF); Meyer, MS (Meyer, MS); Flowers, DL (Flowers, DL)

Study 1 retrospectively analyzed neuropsychological and psychoeducational tests given to N = 220 first graders, with follow-up assessments in third and eighth grade. Four predictor constructs were derived: (1) Phonemic Awareness, (2) Picture Vocabulary, (3) Rapid Naming, and (4) Single Word Reading. Together, these accounted for 88%, 76%, 69%, and 69% of the variance, respectively, in first, third, and eighth grade Woodcock Johnson Broad Reading and eighth grade Gates-MacGinitie. When Single Word Reading was excluded from the predictors, the remaining predictors still accounted for 71%, 65%, 61%, and 65% of variance in the respective outcomes. Secondary analyses of risk of low outcome showed sensitivities/specificities of 93.0/91.0, and 86.4/84.9, respectively, for predicting which students would be in the bottom 15% and 30% of actual first grade WJBR.

Sensitivities/specificities were 84.8/83.3 and 80.2/81.3, respectively, for predicting the bottom 15% and 30% of actual third grade WJBR outcomes; eighth grade outcomes had sensitivities/specificities of 80.0/80.0 and 85.7/83.1, respectively, for the bottom 15% and 30% of actual eighth grade WJBR scores. Study 2 cross-validated the concurrent predictive validities in an N = 500 geographically diverse sample of late kindergartners through third graders, whose ethnic and racial composition closely approximated the national early elementary school population. New tests of the same four predictor domains were used, together taking only 15 minutes to administer by teachers; the new Woodcock-Johnson III Broad Reading standard score was the concurrent criterion, whose testers were blind to the predictor results. This cross-validation showed 86% of the variance accounted for, using the same regression weights as used in Study 1. With these weights, sensitivity/specificity values for the 15% and 30% thresholds were, respectively, 91.3/88.0 and 94.1/89.1. These validities and accuracies are stronger than others reported for similar intervals in the literature.

School Readiness of Low-Income Children at Risk for School Failure
Wright, Cheryl; Diener, Marissa; Kay, Susan C
Journal of Children & Poverty vol. 6, no. 2 (Sep 2000), p. 99-117
The goal of this research project was to gain information about the readiness skills of kindergarten children in 11 inner-city schools with the highest poverty rates in the Salt Lake City School District. Kindergarten teachers & principals in these schools were interviewed regarding their perceptions of the readiness skills needed for these children to be successful in their schools. A summary of the readiness skills of the kindergarten children was derived from a state mandated Pre-Kindergarten Assessment. Most principals stressed children's social & emotional development as a priority in school readiness. The majority of teachers emphasized literacy as a prerequisite for school success. Yet, the Pre-Kindergarten Assessment revealed that one fourth of the children could not identify the front of a book & two thirds of the children did not know where to start or which direction to go when reading. Half of the parents of these children reported that they rarely read to their children & that they had only visited a library once or not at all. The gap between the readiness skills educators think these children need & the skills children enter school with presents a serious problem for educators & policymakers. Multiple intervention strategies are recommended including providing education & home activities to enhance children's readiness skills, coordinating access to early childhood programs & educating parents on available community resources.

Examining the concurrent validity of assessing preschool language and literacy skills
Xu, Yaoying
Early Child Development and Care vol. 182, no. 5-6 (May 2012 - Jun 2012), p. 741; 2012
The purpose of this study was to examine the concurrent validity of the assessment for an early language and literacy project. The goal of the project was to promote a successful transition to kindergarten for preschoolers who were at risk for reading difficulties by equipping them with the necessary language and literacy skills needed for early reading success. Both child outcome data and classroom/teacher level data were collected at the beginning and the end of the academic semester. Child-level pre- and post-tests indicated that participating children's language and literacy skills were improved in name writing, letter recognition, beginning sound awareness, rhyming awareness, and print knowledge. Findings from the validity study suggested a significant relationship between- and within-child outcome measures. A significant relationship was also found between norm-referenced child outcome measures and classroom-level measures; however, no significant relationship was identified between criterion-referenced child outcome measures and classroom-level measures. Implications of this study were discussed

Head Start

Bierman, K.L., Nix, R.L., Greenberg, M.T., Blair, C., Domitrovich, C.E.
Executive functions and school readiness intervention: Impact, moderation, and mediation in the Head Start REDI program
(2008) Development and Psychopathology, 20 (3), pp. 821-843.
http://www.scopus.com/inward/record.url?eid=2-s2.0-48949116384&partnerID=40&md5=410bc8b5dab126fef949075d7399bde1
Pennsylvania State University, 251 Moore Building, University Park, PA 16802, United States

Despite their potentially central role in fostering school readiness, executive function (EF) skills have received little explicit attention in the design and evaluation of school readiness interventions for socioeconomically disadvantaged children. The present study examined a set of five EF measures in the context of a randomized-controlled trial of a research-based intervention integrated into Head Start programs (Head Start REDI). Three hundred fifty-six 4-year-old children (17% Hispanic, 25% African American; 54% girls) were followed over the course of the prekindergarten year. Initial EF predicted gains in cognitive and social-emotional skills and moderated the impact of the Head Start REDI intervention on some outcomes. The REDI intervention promoted gains on two EF measures, which partially mediated intervention effects on school readiness. We discuss the importance of further study of the neurobiological bases of school readiness, the implications for intervention design, and the value of incorporating markers of neurobiological processes into school readiness interventions.

Hammer, C.S.a , Farkas, G.b , Maczuga, S.c
The language and literacy development of head start children: A study using the family and child experiences survey database
(2010) Language, Speech, and Hearing Services in Schools, 41 (1), pp. 70-83.
http://www.scopus.com/inward/record.url?eid=2-s2.0-73649139914&partnerID=40&md5=2e09572ff9d3f2093abca688b68b644f
Temple University, Philadelphia, United States; University of California, Irvine, United Kingdom; The Pennsylvania State University, Philadelphia, United States
Purpose: This article provides information about the Head Start Family and Child Experiences Survey (FACES). It also presents the findings of a study that capitalizes on the strengths of the data from FACES to investigate the impact of child and family characteristics, speech-language impairment, and the home literacy environment on the language and early literacy outcomes of children from low income families. Method: Data from the FACES 1997 cohort were used in this study. Variables included in the analysis were child and family characteristics (e.g., age, gender, ethnicity, etc.); parent report of speech-language impairment; frequency of home literacy activities; and children's scores on vocabulary, letter-word identification, and early reading assessments. Results: The results revealed that children's vocabulary abilities in Head Start were affected by maternal education, ethnicity, and the frequency of home literacy activities, and children's letter-word identification abilities were impacted by maternal education and the child's gender and age. Additionally, children's reading abilities in kindergarten were predicted by ethnicity, speech-language impairment, and the home literacy environment, as well as by children's vocabulary and letter-word identification abilities in Head Start. Conclusion: The findings demonstrate the unique contributions that the home literacy environment and the presence of speech-language impairment during preschool make in children's early reading outcomes.

Effects of the Tennessee Voluntary Pre-Kindergarten Program on School Readiness (ED530634)

Author(s):	Lipsey, Mark W.; Hofer, Kerry G.; Bilbrey, Carol; Farran, Dale C.	Pub Date:	2012-00-00
		Pub Type(s):	Reports - Research
Source:	Society for Research on Educational Effectiveness		
Abstract:			

This study includes a randomized control experiment, but that component could only be implemented in a limited number of schools with more applicants than seats in the pre-k program. Informative as that component is about the effects of Tennessee Voluntary Pre-Kindergarten (TN-VPK), the participating schools do not provide a representative sample of the TN-VPK classrooms in Tennessee. To provide a more representative statewide picture, a stratified random sample of schools with TNVPK classrooms was drawn and enrolled in an age cutoff regression-discontinuity designs. This design was made possible because TN-VPK has explicit age requirements that are implemented as a strict age cutoffs for TN-VPK eligibility in all schools. Using the two designs concurrently, this study seeks to determine the statewide effect of TN-VPK on both the kindergarten readiness of the participating children and their long-term cognitive and behavioral skills, including performance on the state-administered achievement tests in the third grade. A secondary purpose is to investigate the relationships between those outcomes and the characteristics of the TN-VPK classrooms, e.g., the curriculum used, teacher credentials, and classroom quality, and structural support and monitoring at the district and school levels, detecting impact heterogeneity by these characteristics.

ERIC Full Text (22K)

Early Start - A Literacy-Rich Prekindergarten Program For Children Academically At Risk
MCCORMICK, CE (MCCORMICK, CE); KERR, BM (KERR, BM); MASON, JM (MASON, JM); GRUENDEL, E (GRUENDEL, E)
JOURNAL OF EARLY INTERVENTION Volume: 16   Issue: 1   Pages: 79-86   Published: WIN 1992

Abstract: Early Start is a center-based program for 4-year-old prekindergarten children at risk of academic failure because of their home or community environment. This state-funded program successfully incorporated literacy activities into a supportive environment which informally encouraged practice with early reading and writing. The article describes the development of the program, the project's daily activities from the perspective of emergent literacy, and evaluative findings regarding literacy development. Researchers conducted direct child assessment and classroom observations to document the children's capabilities and participation in literacy activities during the course of the school year.

Project Early Kindergarten Evaluation: Results through 2009-10 of a Saint Paul Public Schools Initiative (ED518418)

Author(s):	Maxfield, Jennifer; Gozali-Lee, Edith; Mueller, Dan	Pub Date:	2010-11-00
Source:	Wilder Research	Pub Type(s):	Numerical/Quantitative Data; Reports - Research

Abstract:
Project Early Kindergarten (PEK) aims to improve the school-readiness of Saint Paul children and help close the achievement gap through offering high-quality educational experiences for preschool children. This report comes at the conclusion of the sixth year of PEK. Following an initial planning year (2004-05), PEK has served children through the school component for five years (2005-06 to 2009-10) and through the community child care component for four years (2006-07 to 2009-10). As shown in Figure 1, at this point Wilder Research outcomes data are available for children attending the first three years of PEK at school sites and the first four years of PEK at child care sites. More child care than school-based cohorts are being studied due to smaller sized cohorts in child care. This report summarizes the program's implementation and outcomes results to date, with an emphasis on new results from the 2009-10 school year (highlighted in gray in Figure

1). The report begins with a brief overview of the results from previous years. The remainder of the report focuses on the outcomes for which new data are available. For these outcomes, the new data are presented, as well as previous years' data on the same outcomes in order to examine stability and change in outcomes over time. This is an interim report, and future years' data will be provided in subsequent reports. Appendices include: (1) Program goals and components; (2) District pre-kindergarten consolidation; (3) Characteristics of children; (4) Evaluation; (5) School-based PEK results; (6) Community-based PEK results; and (7) References. (Contains 67 figures.) [For "Project Early Kindergarten Evaluation: Summary of Results through 2009-10 of a Saint Paul Public Schools Initiative," see ED518453.]

ERIC Full Text (844K)

WWC Quick Review of the Report "Head Start Impact Study: Final Report" (ED510851)

Abstract:
This study examined the effects of offering Head Start to preschoolers. Head Start is a federal program aimed at boosting the school readiness of low-income children by providing preschool education and health and nutrition services. The study analyzed data on about 4,700 preschool-aged children who applied for enrollment for the 2002-03 program year at one of about 380 Head Start centers randomly selected for the study. The study followed the students through first grade. The study compared the outcomes of children who were offered enrollment in Head Start to the outcomes of children who were not offered enrollment. School-readiness outcomes, which are the focus of this quick review, were measured using standardized cognitive assessments of language and literacy, pre-writing, and math skills administered at the end of each year through first grade. The study found that, for 3-year-olds, children offered enrollment in Head Start had higher scores on four of eight measures of language and literacy, the single measure of pre-writing, and one of two measures of math skills at the end of the Head Start year than children not offered enrollment. However, none of these effects were statistically significant when measured at the end of the following year, kindergarten, or first grade. For 4-year-olds, the study authors found that children offered enrollment in Head Start had higher scores on six of eight measures of language and literacy at the end of the Head Start year than children not offered enrollment. However, none of these effects were statistically significant when measured at the end of kindergarten or first grade. There were no significant effects for the measures of pre-writing or math skills. The research described in this report is consistent with WWC evidence standards. A strength is that the groups of students contrasted in the study were formed by random assignment. This quick review cautions that the report contains conflicting information about the sample sizes used in the main analyses of 3-year-olds at the end of their first-grade year and 4-year-olds at the end of their Head Start year, making it difficult to determine the attrition rates for these samples. For this reason, findings from these rounds of data collection should be interpreted with caution. [The following study is reviewed in this quick review: Puma, M. et al. (2010). "Head Start impact study: Final report." Washington, DC: Administration for Children and Families, U.S. Department of Health and Human Services.]Hide Full Abstract

Research-Based Responses to Key Questions about the 2010 Head Start Impact Study. Early Childhood Highlights. Volume 2, Issue 1 (ED521828)

Abstract:
Since 1965, Head Start has provided comprehensive services to help prepare the nation's most disadvantaged three- to five-year-old children for school and to strengthen their families. In 1998 Congress instructed the Department of Health and Human Services (DHHS) to conduct an evaluation of Head Start to determine its impact on child development and to identify which children enrolled in Head Start benefit the most. This evaluation, the 2010 Head Start Impact Study (HSIS or Impact Study), adds to a growing body of rigorous research on Head Start and other early care and education (ECE) programs and helps identify the program's strengths and weaknesses. The Impact Study began in the fall of 2002 when researchers began collecting data on nearly 5,000 three- and four-year-olds who were entering Head Start programs. The Impact Study tracked children over time, with findings on children's outcomes at three points--referred to throughout this document as Wave 1, Wave 2, and Wave 3. Wave 1 assessed children's outcomes at the end of their first year of participation in Head Start in 2002 (for groups of three- and four-year-olds). Wave 2 reported on outcomes at the end of kindergarten or first grade year, and is the most recent data available from the Head Start Impact Study. Wave 3, which is currently being analyzed and has not yet been released, will show findings on children's outcomes at the end of third grade. This document provides background information on the Head Start program and discusses key findings from the Impact Study through a series of a questions and answers. It concludes with commentary on the Impact Study from a research perspective, highlighting key policy and practice considerations relating to supporting developmentally appropriate and effective early childhood interventions, specifically noting that: (1) Head Start's whole-child program model is research-based and developmentally appropriate for promoting school readiness and strengthening families; (2) Starting early with high-quality interventions makes a difference; (3) The Impact Study shows how Head Start is contributing to measurable developmental gains for certain subgroups of disadvantaged children. However, rigorous program improvement is needed to improve Head Start's overall effectiveness in supporting the developmental needs of disadvantaged children and their families; (4) In considering program improvements, decision makers would benefit from a better understanding of factors that contribute to successful transitions from early learning settings to elementary school; and (5) Findings from the Impact Study should be considered alongside other research on Head Start and early childhood. (Contains 4 tables, 6 resources and 47 endnotes.

Head Start Children's Transition to Kindergarten: Evidence from the Early Childhood Longitudinal Study
Pigott, Therese D; Israel, Marla Susman
Journal of Early Childhood Research vol. 3, no. 1 (Feb 2005), p. 77-104

It has been acknowledged that children from poverty begin school missing many of the prerequisites for school success. The 1963 US initiative, Head Start, is the major federal program aimed at providing children in poverty the experiences necessary to start school on an equal footing with their same-age peers. This article uses data from the Early Childhood Longitudinal Study (ECLS) to examine the reading & math assessment scores of Head Start children as compared to their same-age peers at kindergarten entry. The data suggests that while Head Start children score higher than their same-age peers when compared to non-Head Start children from the same socio-economic status, there is still a gap between Head Start children & their peers in schools with higher social economic standing. The article brings an interdisciplinary focus to the issue of how 'peer' is defined for disadvantaged children when examining achievement gaps & relative program effectiveness.

Head Start Impact Study. Final Report. Executive Summary (ED507847)

Author(s):	Puma, Michael; Bell, Stephen; Cook, Ronna; Heid, Camilla; Shapiro, Gary; Broene, Pam; Jenkins, Frank; Fletcher, Philip; Quinn, Liz; Friedman, Janet; Ciarico, Janet; Rohacek, Monica; Adams, Gina; Spier, Elizabeth	Pub Date:	2010-01-00
		Pub Type(s):	Reports - Research
		Peer Reviewed:	
Source:	Administration for Children & Families		

Abstract:
This report summarizes the findings from a study on the impacts of Head Start on children and families during the children's preschool, kindergarten, and 1st grade years. Its study goals were to: (1) Determine the impact of Head Start on children's school readiness, and on parental practices that support children's development; and to (2) determine under what circumstances Head Start achieves its greatest impact and for which children. (Contains 10 exhibits and 14 footnotes.) [For the "Head Start Impact Study. Final Report," see ED507845. For the "Head Start Impact Study. Technical Report," see ED507846.]
ERIC Full Text (488K)

Examining the Sustainability of an Evidence-Based Preschool Curriculum: The REDI Program (EJ947500)

| Author(s): | Sanford DeRousie, Rebecca M.; Bierman, Karen L. | Pub Date: | 2012-00-00 |
| Source: | Early Childhood Research Quarterly, v27 n1 p55-65 2012 | | |

Abstract:
This study examined the extent to which an evidence-based preschool curriculum (Head Start REDI) was sustained by 20 teachers during the year following a randomized controlled efficacy trial, when teachers were no longer required by the research project to implement the curriculum. Two quantitative measures of sustainability (teacher ratings, REDI coach ratings) and a qualitative measure (teacher interview) were collected and compared. Sustainability varied by the specific curriculum component, with higher rates of sustainability for the social-emotional component (Preschool PATHS) than for the

language and literacy components. Estimates of sustainability were affected by the method of measurement, with REDI coach ratings and qualitative teacher interviews more closely aligned than teacher ratings. Responses from qualitative interviews identified the main factors that teachers thought affected sustainability. Teacher responses suggest that efforts to promote sustainability are best targeted at reducing barriers, such as competing demands, rather than simply highlighting the benefits of the new curriculum.

COMPONENTS OF PRE-LITERACY AND LITERACY

Auditory Processing

Preschool Impairments in Auditory Processing and Speech Perception
Uniquely Predict Future Reading Problems (EJ915736)

Abstract:
Developmental dyslexia is characterized by severe reading and spelling difficulties that are persistent and resistant to the usual didactic measures and remedial efforts. It is well established that a major cause of these problems lies in poorly specified phonological representations. Many individuals with dyslexia also present impairments in auditory temporal processing and speech perception, but it remains debated whether these more basic perceptual impairments play a role in causing the reading problem. Longitudinal studies may help clarifying this issue by assessing preschool children before they receive reading instruction and by following them up through literacy development. The current longitudinal study shows impairments in auditory frequency modulation (FM) detection, speech perception and phonological awareness in kindergarten and in grade 1 in children who receive a dyslexia diagnosis in grade 3. FM sensitivity and speech-in-noise perception in kindergarten uniquely contribute to growth in reading ability, even after controlling for letter knowledge and phonological awareness. These findings indicate that impairments in auditory processing and speech perception are not merely an epiphenomenon of reading failure. Although no specific directional relations were observed between auditory processing, speech perception and phonological awareness, the highly significant concurrent and predictive correlations between all these variables suggest a reciprocal association and corroborate the evidence for the auditory deficit theory of dyslexia.

Auditory and visual perception processes and reading ability: A quantitative reanalysis and historical reinterpretation
Kavale, KA (Kavale, KA); Forness, SR (Forness, SR)
LEARNING DISABILITY QUARTERLY Volume: 23 Issue: 4 Pages: 253-270 DOI: 10.2307/1511348 Published: FAL 2000
Meta-analysis was used to integrate statistically the literature assessing the relationship between auditory and visual perception and reading achievement. From 267 studies conducted between 1950-1980, 2,294 correlation coefficients were collected and aggregated into homogeneous groupings across five auditory perceptual skills, eight visual perceptual skills, four reading skills, and two subject groups. Findings were interpreted through the binomial effect size display, which indicates the increase in predictive accuracy rather than the percent of variance explained ($r(2)$). Stepwise multiple-regression analyses were used to order perceptual skills in terms of their usefulness for predicting reading skills and to examine the role of intelligence in prediction. The findings indicated that auditory and visual

perceptual skills can successfully increase the accuracy of predicting reading achievement, but the magnitude of the increases in predictive accuracy was contingent upon the combination of variables studied and was significantly reduced if an IQ score was known. It was concluded that, while there was some justification for early conceptualizations of learning disability emphasizing perception, the limitations surrounding the magnitude and nature of the relationship between perceptual skills and reading as well as recent advances showing other processes holding greater promise fbr explaining reading disability, perceptual processes no longer need to be considered primary factors in predicting reading ability.

Metrical stress sensitivity in young children and its relationship to phonological awareness and reading

Wood, C (Wood, Clare)

This paper reports two studies of young English-speaking children's ability to cope with changes to the metrical stress pattern of spoken words and the relationship between this ability, phonological awareness and early reading development. Initially, 39 children aged 4 and 5 years were assessed on their ability to identify mispronounced words, including words that had their metrical stress pattern reversed. The children were significantly worse at identifying words that had their metrical stress pattern reversed than words that were mispronounced in other ways. The second study was a cross-sectional comparison of 31 5, 6 and 7-year-old children's performance on the metrical stress reversal condition of the mispronunciation task. Measures of the children's written language skills and phonological awareness were also taken. The 7-year-old children outperformed the 5-year-olds on the metrical stress task. Performance on this measure was associated with most of the measures of phonological awareness and literacy, and was associated with rhyme awareness and spelling ability after age had been taken into account. Moreover, metrical stress sensitivity could account for variance in spelling ability after phonological awareness had been taken into account, and after vocabulary had been taken into account. This suggests that stress sensitivity may influence spelling development in a way that is independent of its contribution to phonological representations.

Language

Abstract:
It is well established that monolingual preschoolers' oral language development (vocabulary and oral comprehension) contributes to their later reading abilities; however, less is known about this relationship in bilingual populations where children are developing knowledge of two languages. It may be that children's abilities in one language do not contribute to their reading abilities in their other language or that children's experiences with either language assist them in developing a common underlying proficiency that they draw upon when learning to read. The purpose of this study was to investigate the relationship among bilingual children's receptive language development and reading outcomes in first grade. Eighty-one bilingual children who were attending Head Start participated in the study. Growth curve models were used to examine the relationship between children's language abilities during two years in Head Start and reading outcomes at the end of first grade. Children's growth in both English and Spanish receptive vocabulary and oral comprehension predicted their English and Spanish reading abilities at the end of first grade within languages. Associations were also observed between languages with growth in English receptive language predicting Spanish reading comprehension and growth in Spanish receptive language predicting English reading comprehension. Learning outcomes: The reader will be able to (1) describe the common underlying proficiency model; (2) identify key factors of consideration when studying bilingual children; (3) understand the associations between preschool language abilities in English and Spanish and English and Spanish reading outcomes; and (4) identify ways in which future clinical practice may be impacted by the study's findings.

Abstract:
Indirect effects of preschool classroom indexes of teacher talk were tested on fourth-grade outcomes for 57 students from low-income families in a longitudinal study of classroom and home influences on reading. Detailed observations and audiotaped teacher and child language data were coded to measure content and quantity of verbal interactions in preschool classrooms. Preschool teachers' use of sophisticated vocabulary during free play predicted fourth-grade reading comprehension and word recognition (mean age = 9; 7), with effects mediated by kindergarten child language measures (mean age = 5; 6). In

large group preschool settings, teachers' attention-getting utterances were directly related to later comprehension. Preschool teachers' correcting utterances and analytic talk about books, and early support in the home for literacy predicted fourth-grade vocabulary, as mediated by kindergarten receptive vocabulary..

Gender and language issues in assessing early literacy: Group differences in children's performance on the test of early reading ability
Harper, SN (Harper, Sarah N.)[1]; Pelletier, JP (Pelletier, Janette P.)
JOURNAL OF PSYCHOEDUCATIONAL ASSESSMENT Volume: 26 Issue: 2 Pages: 185-194 DOI: 10.1177/0734282908314105 Published: JUN 2008
Abstract: The study investigated gender and language group differences in children's performance on two versions of the Test of Early Reading Ability (TERA-2 and TERA-3). Two groups of children consisting of girls and boys and English first language (L1) and English language learners (ELL) participated in the study. Children in Group 1 completed the TERA-2, in which standard procedures involve obtaining a total score of children's early reading ability. Alternatively, children in Group 2 were administered the TERA-3, which yields measures of children's ability on three individual subtests (alphabet, conventions, and meaning). Results showed that gender and language group differences on the TERA-2 were not evident. However, L I children outperformed ELL children on the meaning subtest of the TERA-3, while showing no differences on either alphabet or conventions. The findings speak to the importance of measuring individual components of early reading to assess children's emergent literacy.

Long-term outcome of oral language and phonological awareness intervention with socially disadvantaged preschoolers: the impact on language and literacy
Henning, C (Henning, Caroline); McIntosh, B (McIntosh, Beth); Arnott, W (Arnott, Wendy)[2]; Dodd, B (Dodd, Barbara)[1]
JOURNAL OF RESEARCH IN READING Volume: 33 Issue: 3 Pages: 231-246 DOI: 10.1111/j.1467-9817.2009.01410.x Published: AUG 2010
Early intervention aims to prevent poor literacy outcomes associated with social disadvantage. This study examined whether the short-term positive effect of a preschool classroom-based oral language and phonological awareness (PA) programme was maintained and transferred to literacy 2 years later. The vocabulary knowledge, grammatical skill, auditory comprehension and reading comprehension of 54 6-7-year-old Australian children who attended school in a low-socioeconomic area were measured. Children's PA abilities were also assessed and are reported elsewhere. There were no significant differences between children who had received intervention in preschool and those who had not, with the entire cohort performing below the average range of the general population. The findings indicated that while generating short-term positive effects, intervention in preschool did not enhance socially disadvantaged children's language and literacy achievement in the long term.

Speech development patterns and phonological awareness in preschool children
Mann, VA (Mann, Virginia A.); Foy, JG (Foy, Judith G.)
ANNALS OF DYSLEXIA Volume: 57 Issue: 1 Pages: 51-74 DOI: 10.1007/s11881-007-0002-1 Published: JUN 2007
To examine the association between speech production and early literacy skills, this study of 102 preschool children looked at phonological awareness in relation to whether children were delayed, typical, or advanced in their articulation of consonants. Using a developmental typology inspired by some of the literature on speech development (Kahn and Lewis, The Kahn-Lewis phonological analysis, 1986; Shriberg, Journal of Speech and Hearing Research 36(1):105-140, 1993a), we found that failure to master the early-8 consonants and a greater

prevalence of certain types of production errors were associated with deficient phonological awareness. We also found that children who made no consonant errors had advanced phonological awareness relative to other children in the sample. In all cases, both productive speech patterns and speech errors were more closely linked with rhyme awareness than with phoneme awareness. The association between speech production and rhyme awareness may provide some new directions for the early preschool assessment of risk for reading problems.

Assessment of language development of preschoolers: validating Morrow's Checklist for Assessing Early Literacy Development
Mok, Magdalena Mo Ching; Lam, Hazel Mei Yung
Early Child Development and Care vol. 181, no. 2 (Feb 2011), p. 203
This study aimed to establish the validity of the Language Development Rating Scale and the Attitudes toward Reading and Voluntary Reading Behaviour Rating Scale in Morrow's Checklist for Assessing Early Literacy Development for use with preschool children in Hong Kong. The sample comprised 2619 preschool children aged three-five years who were currently enrolled in preschool levels K1-K3 in Hong Kong. Analysis showed that the two scales had strong construct validity and internal consistency, and that both fit well to the Rasch model. Nevertheless, findings of the Rasch analysis suggested that the level of the Language Development Scale did not align well with the language proficiency of kindergarten children in the sample who were more proficient than the proficiency levels demanded by the items in the scale. The results suggested such further refinement such as the inclusion of more advanced items may be necessary for valid local applications

Preliteracy Speech Sound Production Skill and Later Literacy Outcomes: A Study Using the Templin Archive (EJ972190)

Author(s):	Overby, Megan S.; Trainin, Guy; Smit, Ann Bosma; Bernthal, John E.; Nelson, Ron	Pub Date:	2012-01-00
Source:	Language, Speech, and Hearing Services in Schools, v43 n1 p97-115 Jan 2012		

Abstract:
Purpose: This archival study examined the relationship between the speech sound production skill of kindergarten children and literacy outcomes in Grades 1-3 in a data set where most children's vocabulary skills were within normal limits, speech therapy was not provided until 2nd grade, and phonological awareness instruction was discouraged at the time data were collected. Method: Data were accessed from the Templin Archive (2004), and the speech sound production skill of 272 kindergartners were examined relative to literacy outcomes in 1st and 2nd grade (reading) and 3rd grade (spelling). Results: Kindergartners in the 7th percentile for speech sound production skill scored more poorly in 1st- and 2nd-grade reading and 3rd-grade spelling than did kindergartners with average speech sound production skill; kindergartners in the 98th percentile achieved superior literacy skills compared to the mean. Phonological awareness mediated the effects of speech sound production skill on reading and spelling; vocabulary did not account for any unique variance. Conclusion: Speech sound disorders appear to be an overt manifestation of a complex interaction among variables influencing literacy skills, including nonlanguage cognition, vocabulary, letter knowledge, and phonological awareness. These interrelationships hold across the range of speech sound production skill, as children with superior speech sound production skill experience superior literacy outcomes.

Children's oral narrative and reading skills in the first 3 years of reading instruction

Reese, E (Reese, Elaine)[1]; Suggate, S (Suggate, Sebastian)[1]; Long, J (Long, Jennifer)[2]; Schaughency, E (Schaughency, Elizabeth)[1]

This research investigated the link between oral narrative and reading skills in the first 3 years of reading instruction. Study 1 consisted of 61 children (M = 6:1 years) who had experienced 1 year of reading instruction on average. Children's story retelling was scored for memory and narrative quality. The quality of children's narratives correlated positively with their reading skill at this age, but narrative quality did not uniquely predict their reading skill 1 year later. Study 2 consisted of 39 children (M = 7:0 years) who had experienced 2 years of reading instruction on average. At this age, the quality of children's narratives uniquely predicted their reading skill concurrently and 1 year later, even after controlling for their receptive vocabulary and early decoding. These findings have implications for theories of the oral language foundations of reading and for assessment in the early years of reading instruction.

The development of literacy in preschool and primary grades: Work by the Center For The Improvement Of Early Reading Achievement

Stahl, SA (Stahl, SA); Yaden, DB (Yaden, DB)

To reach the national goal that all children in the United States will read at an appropriate level by the end of third grade, the Center for the Improvement of Early Reading Achievement (CIERA) has studied the reading growth of children in preschool and primary classes, both in and out of school. Our framework suggests that children need to develop their knowledge of language and the ability to recognize words fluently so that they can understand the books they read. CIERAs work has attempted to explicate how this development occurs and how supportive learning environments can foster it, especially for high-poverty and linguistically diverse children. This article reviews our work in early language development and literacy assessment and the development of word-recognition abilities, in the environments of preschools, primarygrade classes, and home-school connections, with the intention of understanding how these environments can more effectively provide the support needed for all children to attain success as readers and writers.

Changing Nonmainstream American English Use and Early Reading Achievement from Kindergarten to First Grade (EJ971970)

Author(s): Terry, Nicole Patton; Connor, Carol McDonald

Pub Date: 2012-02-00

Abstract:

Purpose: This study had 2 principal aims: (a) to examine whether children who spoke Nonmainstream American English (NMAE) frequently in school at the end of kindergarten increased their production of Mainstream American English (MAE) forms by the end of first grade, and (b) to examine concurrent and predictive relations between children's NMAE use and reading skills. Method: A longitudinal design was implemented with 49 children who varied in their spoken NMAE production in kindergarten. Word reading, phonological awareness, and receptive vocabulary skills were measured at both time points. Results: Analyses indicated that most children significantly increased their production of MAE forms between the 2 time points; however, this change was not associated with change in letter-word reading and phonological awareness skills. Regression analyses showed that NMAE use in kindergarten contributed significantly and independently to the variance in word reading in first grade, even after accounting for phonological awareness (although word reading in kindergarten was the best predictor of word reading in first grade). Conclusions: The findings extend previous reports of a significant relation between NMAE use and reading among young children. Theoretical, research, and educational implications of the findings are discussed.

Letter Naming

Reading First Kindergarten Classroom Instruction and Students' Growth in Phonological Awareness and Letter Naming-Decoding Fluency
Al Otaiba, Stephanie; Connor, Carol; Lane, Holly; Kosanovich, Marcia L; Schatschneider, Chris; Dyrlund, Allison K; Miller, Melissa S; Wright, Tyran L
Journal of School Psychology vol. 46, no. 3 (Jun 2008), p. 281-314
This study investigated the role of the amount, content, and implementation of reading instruction provided by 17 kindergarten teachers in eight Reading First elementary schools as it related to students' progress (n = 286 students) on early reading assessments of phonological awareness and letter naming-decoding fluency. Children's phonological awareness and letter naming-decoding fluency grew significantly from fall to spring. On average, across the three 60 min observations, teachers provided over 30 min a day of phonological awareness and phonics instruction and 15 min a day of vocabulary and comprehension instruction. Global ratings of instructional quality revealed two implementation factors: explicit and individualized implementation and meaningful interactions around text. Hierarchical linear modeling revealed that the amounts of specific instructional content, as well as how this instruction was implemented, was related to students' letter knowledge and phonological awareness skill growth.

Cronin, V., Carver, P.
Phonological sensitivity, rapid naming, and beginning reading
(1998) Applied Psycholinguistics, 19 (3), pp. 447-461.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0032349330&partnerID=40&md5=381eea7dada78980e0fde902b8e8e80e
Mount Saint Vincent University, Halifax, NS B3M 2J6, Canada
Reading acquisition was related to phonological sensitivity and rapid naming in a longitudinal study with young children. Phonological assessment consisted of rhyme and initial consonant discrimination, while the rapid naming tasks were made up of pictures, letters, and numbers. The subjects were 95 children from two grade levels, primary and first grade. They were tested in the fall and spring of the first year and the spring of the second year. It was found that the phonological and rapid naming tests each predicted unique variance in reading attainment, as measured at the end of the second year of the study. The rapid naming responses became more automatic early in the first grade year, while naming times generally became faster. Although many researchers regard rapid naming as part of the phonological core, the present article discusses the various advantages of considering rapid naming as a separate factor in reading development.

Alphabet Knowledge in Preschool: A Rasch Model Analysis (EJ974441)

Author(s):	Drouin, Michelle; Horner, Sherri L.; Sondergeld, Toni A.	Pub Date:	2012-00-00
Source:	Early Childhood Research Quarterly, v27 n3 p543-554 3rd Qtr 2012		

Abstract:
In this study, we used Rasch model analyses to examine (1) the unidimensionality of the alphabet knowledge construct and (2) the relative difficulty of different alphabet knowledge tasks (uppercase letter recognition, names, and sounds, and lowercase letter names) within a sample of preschoolers (n=335). Rasch analysis showed that the four

components of alphabet knowledge did work together as a unidimensional construct, indicating all alphabet tasks administered were measuring the same underlying skill. With regard to difficulty of tasks, letter recognition was easier than letter naming, which in turn was easier than letter sounds, and uppercase letter names were easier than lowercase letter names. Most notably, most of the alphabet tasks overlapped, and the Rasch models for the single tasks were no more reliable than the combined measure. This suggests that these alphabetic tasks do not measure distinct skills but are instead indicators of a single ability. Consequently, we support the conceptualization of alphabet knowledge as a unitary construct, and suggest that those assessing and teaching alphabet knowledge in preschool use tests and methods that combine the various alphabetic tasks rather than separating them. These combined assessments will be more likely to capture the range of abilities within a preschool sample and avoid the floor and ceiling effects that have so often complicated early literacy research.

Letter names, letter sounds and phonological awareness: an examination of kindergarten children across letters and of letters across children
Evans, MA (Evans, Mary Ann); Bell, M (Bell, Michelle); Shaw, D (Shaw, Deborah); Moretti, S (Moretti, Shelley); Page, J (Page, Jodi)
READING AND WRITING Volume: 19 Issue: 9 Pages: 959-989 DOI: 10.1007/s11145-006-9026-x Published: DEC 2006
In this study 149 kindergarten children were assessed for knowledge of letter names and letter sounds, phonological awareness, and cognitive abilities. Through this it examined child and letter characteristics influencing the acquisition of alphabetic knowledge in a naturalistic context, the relationship between letter-sound knowledge and letter-name knowledge, and the prediction of Grade 1 phonological awareness and word identification from these variables. Knowledge of letter sounds was better for vowels and for letters with consonant-vowel names than for those with vowel-consonant names or names bearing little relationship to their sounds. However, there were anomalies within each category reflecting characteristics of the individual letters. Structural equation modelling showed that cognitive ability, comprising receptive vocabulary, non-verbal reasoning, rapid automatized naming of colours, and phonological memory significantly contributed to alphabetic knowledge and phonological awareness. In turn, letter-name knowledge but not phonological awareness predicted letter-sound knowledge and subsequent reading skill.

Letter training and its effect on the development of beginning reading skills
Fugate, MH (Fugate, MH)
Source: SCHOOL PSYCHOLOGY QUARTERLY Volume: 12 Issue: 2 Pages: 170-192 DOI: 10.1037/h0088957 Published: SUM 1997
The effect of training to improve letter-naming speed on beginning reading skill was evaluated with 39 first-grade students. Subjects were randomly assigned to training and control groups and were administered curriculum-based measures of reading at pretraining, post-training, and follow-up. Trained students demonstrated significantly faster letter-naming speed at post-training assessment as compared to untrained peers. However, the difference in letter-naming speed did not lead to a significant difference in overall measured reading skill as evaluated by an analyses of covariance. Scores for one of the four reading measures (Fall passage oral reading rate) demonstrated a significant difference at pose-training, but were not significant at follow-up. In two of the three remaining measures of beginning reading skill, differences between the mean scores of trained and untrained students were greatest at points where the assessment of skills most closely matched the content of classroom instruction. However, these differences were not statistically significant.

Johnston, RS (Johnston, RS); Anderson, M (Anderson, M); Holligan, C (Holligan, C)

This study was carried out to examine the extent to which preschool children are aware of the phonemic structure of the spoken word and to investigate how they acquire that knowledge. The four year old non-readers carried out a battery of tasks designed to assess product name reading ability, knowledge of the alphabet, rhyme skills and explicit phonemic awareness ability. There was evidence that they generally acquired knowledge of the alphabet before they showed explicit phonemic awareness ability. Fixed order regression analyses showed that ability to read and write the alphabet generally accounted for unique variance in phoneme awareness and product name reading ability over and above that accounted for by rhyme skills but that rhyme ability accounted for no unique variance beyond that accounted for by alphabet knowledge. Further analyses showed that alphabet knowledge also contributed unique variance to product name reading ability over and above that accounted for by phonemic awareness ability but that the reverse was not the case. It was hypothesised that many preschool non-readers may start to gain an insight into the phonemic structure of the spoken word by becoming aware of the connection between the sounds of letters in environmental print and the sounds of the spoken word.

An investigation of four hypotheses concerning the order by which 4-year-old children learn the alphabet letters

Justice, LM (Justice, Laura M.); Pence, K (Pence, Khara); Bowles, RB (Bowles, Ryan B.); Wiggins, A (Wiggins, Alice)

This study tested four complementary hypotheses to characterize intrinsic and extrinsic influences on the order with which preschool children learn the names of individual alphabet letters. The hypotheses included: (a) own-name advantage, which states that children learn those letters earlier which occur in their own names, (b) the letter-order hypothesis, which states that letters occurring earlier in the alphabet string are learned before letters occurring later in the alphabet string, (c) the letter-name pronunciation effect, which states that children learn earlier those alphabet letters for which the name of the letter is in the letter's pronunciation, and (d) the consonant-order hypothesis, which states that children learn earlier those letters for which corresponding consonantal phonemes are learned early in phonological development. Participants were 339 four-year-old children attending public preschool classrooms serving primarily low-income children. Children's knowledge of each of the 26 alphabet letters was assessed, and these data were tested for the four hypotheses using a linear logistic test model (LUM). Results from the LLTM confirmed all four hypotheses to show that the order of letter learning is not random, in that some letters hold an advantage over other letters to influence their order of learning. Implications for educational policy and practice are discussed.

Letter-name letter-sound and phonological awareness: Evidence from Greek-speaking kindergarten children

Manolitsis, G (Manolitsis, George)[1]; Tafa, E (Tafa, Eufimia)[1]

The purpose of this study was to examine longitudinally the development of letter-sound and letter-name knowledge and their relation to each other and to various aspects of phonological awareness in a sample of Greek kindergarten children who did not know how to read. One hundred twenty children aged 58-69 months were assessed on letter-sound and letter-name knowledge, as well as on phonological awareness skills at the beginning, the middle and the end of kindergarten. The findings indicated that: (a) kindergarten children knew more letter-sounds than letter-names in almost every case across the assessment points; (b) letter-sound knowledge predicted letter-name knowledge slightly better than vice

versa; (c) phonological awareness was associated directly with later letter-sound and letter-name knowledge, and (d) the bidirectional hypothesis between phonological awareness and letters knowledge was not confirmed.

Knowledge of the alphabet and explicit awareness of phonemes in pre-readers: The nature of the relationship.

Phillips, BM (Phillips, Beth M.)[1]; Piasta, SB (Piasta, Shayne B.)[2]; Anthony, JL (Anthony, Jason L.)[3]; Lonigan, CJ (Lonigan, Christopher J.)[1]; Francis, DJ (Francis, David J.)
JOURNAL OF SCHOOL PSYCHOLOGY Volume: 50   Issue: 4   Pages: 461-481   DOI: 10.1016/j.jsp.2012.05.002   Published: AUG 2012

We examined the developmental sequence of letter name knowledge acquisition by children from 2 to five years of age. Data from 2 samples representing diverse regions, ethnicity, and socioeconomic backgrounds (ns = 1074 and 500) were analyzed using item response theory (IRT) and differential item functioning techniques. Results from factor analyses indicated that letter name knowledge represented a unidimensional skill; IRT results yielded significant differences between letters in both difficulty and discrimination. Results also indicated an approximate developmental sequence in letter name learning for the simplest and most challenging to learn letters-but with no clear sequence between these extremes. Findings also suggested that children were most likely to first learn their first initial. We discuss implications for assessment and instruction.

Ritchey, K.D.a b c
Assessing letter sound knowledge: A comparison of letter sound fluency and nonsense word fluency
(2008) Exceptional Children, 74 (4), pp. 487-506.
http://www.scopus.com/inward/record.url?eid=2-s2.0-48949120071&partnerID=40&md5=c5c0b4ab58f1105b38577a98a1d0019b
University of Delaware; School of Education, University of Delaware, Newark, United States; School of Education, Willard Hall, University of Delaware, Newark, DE 19716, United States

This article compares 2 fluency-based assessments of letter sound knowledge: letter sound fluency and nonsense word fluency (NWF). Ninety-one children were administered both assessments 5 times during the second half of kindergarten. The assessments were comparable for concurrent and predictive criterion-related validity at single points. The ability to accurately identify which students were at risk for reading difficulty using a single assessment point was examined using established and modified benchmarks. Additionally, 2 scores were analyzed for NWF: total number of sounds and number of sounds blended together in words. Students' responses to NWF varied within and across assessment points. This variability should be considered when NWF is used to make progress monitoring decisions about beginning readers.

Knowledge about word structure in beginning readers: what specific links are there with word reading and spelling?
Sanchez, M (Sanchez, Monique)[1]; Magnan, A (Magnan, Annie)[1]; Ecalle, J (Ecalle, Jean)[1]
EUROPEAN JOURNAL OF PSYCHOLOGY OF EDUCATION Volume: 27   Issue: 3
  Pages: 299-317   DOI: 10.1007/s10212-011-0071-8   Published: SEP 2012

The present study had two aims: (1) to examine kindergarten (Kg) and first grade (G1) children's early word structure knowledge, that is letter, phonological, morphological, and orthographic knowledge, and (2) to provide evidence of specific links between these various types of knowledge and word reading and spelling performance assessed in G1. A short longitudinal study was conducted with French-speaking children. Beyond phonological and morphological knowledge, identified here as in many other studies, the results provided evidence of a level of orthographic knowledge in the Kg children who exhibited an ability to process graphotactic constraints (i.e., legal combinations of letters). Moreover, whatever the type of items (affixed, pseudo-affixed, regular, or irregular words) being processed, either in reading or in spelling, letter naming was seen to be the strongest predictor of reading and

spelling performance. The second important predictor related to phonological knowledge and more particularly phoneme extraction as a proximal predictor. Morphological knowledge appeared to be less important, and finally, the smallest contribution was made by orthographic knowledge.

Vocabulary

Decoding and sight-word naming: Are they independent components of word recognition skill?
Aaron, PG (Aaron, PG); Joshi, RM (Joshi, RM); Ayotollah, M (Ayotollah, M); Ellsberry, A (Ellsberry, A); Henderson, J (Henderson, J); Lindsey, K (Lindsey, K)
Word recognition skill is the foundation of the reading process. Word recognition could be accomplished by two major strategies: phonological decoding and sight-word reading, the latter being a marker for proficient reading. There is, however, a controversy regarding the relationship between decoding and sight-word reading, whether the two are independent or the latter is built on the foundations of the former. A related controversy about instructional strategy could be whether to use whole-word method to improve word recognition skills, or to first build decoding skills and then introduce sight words. Five goals were set up to address these issues: (a) developing a criterion that can be used easily by classroom teachers to assess sight-word reading ability, (b) examining this relationship between decoding and sight-word reading, (c) identifying the mechanism that can explain the relationship, (d) examining factors that facilitate sight-word reading, and (e) discussing potential instructional implications of these findings. In order to accomplish these goals, naming time and word-naming accuracy of three groups of subjects (elementary school children, children identified as having reading disability, and college students) were studied by using a variety of verbal materials. The over-all conclusions are that the difference in naming time of letters and words can be used as a metric for assessing sight-word reading skill. Sight-word reading appears to be intimately related to decoding. Sight-word reading is accomplished by parallel processing of constituent letters of words and is influenced also by the semantic nature of words. It is conjectured that sight-word reading instruction is likely to be successful if decoding skills are firmly established first.

Increasing young low-income children's oral vocabulary repertoires through rich and focused instruction
Beck, IL (Beck, Isabel L.); McKeown, MG (McKeown, Margaret G.)
This article reports on 2 studies with kindergarten and first-grade children from a low-achieving elementary school that provided vocabulary instruction by the students' regular classroom teacher of sophisticated words (advanced vocabulary words) from children's trade books that are typically read aloud. Study I compared the number of sophisticated words learned between 52 children who were directly taught the words and 46 children who received no instruction. As expected, children in the experimental group learned significantly more words. Study 2, a within-subject design, examined 76 children's learning of words under 2 different amounts of instruction, either 3 days or 6 days. In Study 2, the vocabulary gains in kindergarten and first-grade children for words that received more instruction were twice as large. Student vocabulary was assessed by a picture test where students were presented with pictures that represented different words and were asked to identify which picture represented the word that the tester provided. The verbal test was similar but used a sentence description of a scenario instead of a picture. The instructional implications for which words to teach and how to teach them to young children are discussed.

Burton, V.J., Watkins, R.V.

Measuring word learning: Dynamic versus static assessment of kindergarten vocabulary (2007) Journal of Communication Disorders, 40 (5), pp. 335-356.
http://www.scopus.com/inward/record.url?eid=2-s2.0-34547219401&partnerID=40&md5=305dd66631e45b90b8ff9351d9a9a557
Department of Speech and Hearing Science, University of Illinois at Urbana-Champaign, 901 S. Sixth St, Champaign, IL 61820, United States

This preliminary study investigated the potential of using a dynamic approach to assessing expressive word mapping. Because measuring word mapping with productive language responses is much more difficult than measuring receptive word mapping, incorporating a dynamic measure allowed us to tap partial mapping and provided useful information on word learning. Participants were 24 typically developing African American children, from high-risk backgrounds and low-risk backgrounds, as determined by school and family demographics. Performance was compared on the PPVT-III and on the dynamic assessment of word mapping. The dynamic assessment of word mapping provided information about complete and partial mapping of words. Additionally, there was an interaction between risk and performance on the vocabulary and word learning measures. These data suggest that the use of the dynamic measure in conjunction with traditional vocabulary measures may have the potential to provide an estimate of word-learning ability. Learning outcomes: Readers will (1) be able to identify the need for word-learning measures and (2) become familiar with the combined technique of using dynamic assessment and fast mapping.

Subgrouping poor readers on the basis of individual differences in reading-related abilities
Catts, HW (Catts, HW); Hogan, TP (Hogan, TP); Fey, ME (Fey, ME)
JOURNAL OF LEARNING DISABILITIES Volume: 36 Issue: 2 Pages: 151-164 DOI: 10.1177/002221940303600208   Published: MAR-APR 2003
The present study investigated the use of the Reading Component Model to subgroup poor readers. A large sample of poor readers was identified in second grade and subgrouped on the basis of relative strengths and weaknesses in word recognition and listening comprehension. Although homogeneous subgroups were not identified, poor readers could be classified into four subgroups that differed significantly in reading-related abilities. Further analyses showed that poor readers' strengths and weaknesses in listening comprehension, and to a lesser extent in word recognition, were foreshadowed by their abilities on related kindergarten measures. Follow-up testing in the fourth grade indicated that poor readers' individual differences in word recognition and listening comprehension were consistent and that subgroups were moderately stable. The implications of these results for the assessment and remediation of reading disabilities are discussed.

Closing the Vocabulary Gap?: A Review of Research on Early Childhood Vocabulary Practices (EJ946766)

Author(s): Christ, Tanya; Wang, X. Christine Pub Date: 2011-00-00

Source: Reading Psychology, v32 n5
              p426-458 2011

Abstract:
Our qualitative literature review of 31 published studies found that (a) three major approaches are used in early childhood classrooms to support children's vocabulary learning--exposing children to advanced words, providing direct word-meaning instruction, and employing mixed-method interventions; (b) these practices support children's learning of targeted vocabulary words and/or general vocabulary knowledge gains, but various methods have differential impacts on children's depth of word knowledge; and (c) theme-based multimethod interventions are the most likely approach to close the gap. Based on

these findings, we suggest future <mark>research</mark> directions and discuss implications for classroom practice.

Improving the Efficacy of First Grade Reading Screening: An Investigation of Word Identification Fluency With Other Early Literacy Indicators

Clemens, NH (Clemens, Nathan H.)[1]; Shapiro, ES (Shapiro, Edward S.)[2]; Thoemmes, F (Thoemmes, Felix)[3]

This study investigated the accuracy of several early literacy measures that have been used in research and practice for first grade reading screening. A set of measures, Word Identification Fluency (WIF), Letter Naming Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency, were administered as screening measures with 138 first grade students in the fall of the school year. Reading skills were assessed at the end of first grade using Oral Reading Fluency, the Test of Word Reading Efficiency (Sight Word Efficiency and Phonemic Decoding Efficiency), reading Maze, and a latent variable composite. Analyses compared the accuracy at which each screening measure, as well as combinations of screening measures, classified students according to successful or unsuccessful reading outcomes at the end of the year. Receiver operating characteristic curve analyses indicated that when compared with other single screening measures, WIF tended to demonstrate the strongest overall classification accuracy. With levels of sensitivity held constant at .90, combining screening measures with WIF using predicted probabilities from logistic regression analyses resulted in modest improvements in accuracy by reducing the number of false positives. More measures were not always better, however, as models of two or three measures were as accurate as models consisting of all measures. Overall results provided support for WIF as a starting point for first grade reading screening, whereby additional steps might be taken to reduce false positives.

Motion detection, letter position encoding, and single word reading

Cornelissen, PL (Cornelissen, PL); Hansen, PC (Hansen, PC)

Recent research has shown that many people with dyslexia find it unusually difficult to detect flickering or moving visual stimuli, consistent with impaired processing in the magnocellular visual stream. Nonetheless, it remains controversial to suggest that reduced visual sensitivity of this kind might affect reading. We first show that the accuracy of letter position encoding may depend on input from the magnocellular pathway. We then suggest that when children read, impaired magnocellular function may degrade information about where letters are positioned with respect to each other, leading to reading errors which contain sounds not represented in the printed word. We call these orthographically inconsistent nonsense errors letter errors. In an unselected sample of primary school children, we show that the probability of children making "letter" errors in a single word reading task was best explained by independent contributions from motion detection (magnocellular function) and phonological awareness (assessed by a spoonerism task). This result held even when controlling for chronological age, reading ability, and IQ. Together, these findings suggest that impaired magnocellular visual function, as well as phonological deficits, may affect reading.

Teaching sight words to children with moderate to mild mental retardation: Comparison between instructional procedures

Didden, R (Didden, Robert); de Graaff, S (de Graaff, Saskia); Nelemans, M (Nelemans, Marielle); Vooren, M (Vooren, Martijn); Lancioni, G (Lancioni, Giulio)

Differential effects of three training procedures to teach sight words to 13 children with moderate to mild mental retardation were investigated in an alternating treatments design. Number of correct responses was assessed during probe sessions in word-alone (word was presented without picture), integrated-picture (word was presented with integrated picture, no fading), and picture-fading (integrated picture was faded out) conditions. Results show that most children learned to identify sight words fastest in the word-alone condition. Effects were largely maintained during follow-up at 2 to 5 weeks after training.

The role of phonological memory, word recognition, and comprehension skills in reading development: from preschool to grade 2. Dufva, M (Dufva, M); Niemi, P (Niemi, P); Voeten, MJM (Voeten, MJM)

We examined the relationships among phonological awareness, phonological memory, and development of reading skills in a longitudinal study, by following 222 Finnish preschoolers through the grade 2. The main focus was on the role of phonological memory in word recognition and comprehension. The skills assessed were verbal abilities, phonological memory, phonological awareness, word recognition, listening and reading comprehension, altogether comprising the most extensive set of variables so far used in the study of phonological memory and reading. We proposed a structural equation model for the developmental relationships among the variables. This model was largely confirmed by the data. The most significant predictor of word recognition was phonological awareness. Phonological memory had only a weak effect on phonological awareness at preschool age, and via this connection, a weak indirect effect on grade 1 word recognition. Contrary to expectations, phonological memory also had a significant, albeit weak effect on grade 2 word recognition. Phonological memory did not directly affect reading comprehension. However, it was strongly related to listening comprehension at preschool, and via the strong effects of both listening comprehension and word recognition on reading comprehension, there were significant indirect effects of phonological memory on reading comprehension. The results also underline the stability of development of phonological memory, word recognition, and comprehension from preschool to the end of grade 2.

A concept of word in text: A pivotal event in early reading acquisition
Flanigan, K (Flanigan, Kevin)
The purpose of this study was to examine a model of early reading acquisition that hinged on a phenomenon seldom explored in beginning reading research: a child's concept of word in text. Previous research in early literacy acquisition has centered on the role phonological awareness-the ability to consciously attend to and manipulate the sound structure of spoken language-plays in early reading development. However, a small but promising line of research suggests that children's ability to match spoken words to written words while reading connected text-a concept of word in text-is a pivotal event in early reading acquisition that bridges a primitive form of phonological awareness with a more sophisticated form of phonological awareness. In this study, 56 kindergarten children were assessed on measures of beginning consonant awareness, concept of word in text, full phoneme segmentation ability, spelling ability, and word recognition ability. Analysis of the data supported the proposed model and essentially replicated a previous study (Morris, 1993). Most important, the findings of this study strongly support the notion that a child's concept of word in text plays a linchpin role in early reading acquisition. The results of this general line of work may inform early identification for children at risk of reading failure, beginning reading instruction, and future research in early literacy acquisition.

Links Among Segmenting, Spelling, And Reading Words In 1st And 2nd Grades
FOORMAN, BR (FOORMAN, BR); JENKINS, L (JENKINS, L); FRANCIS, DJ (FRANCIS, DJ)

Twenty first graders and twenty second graders were examined on skills in segmenting, reading, and spelling 50 words with regular and exceptional spelling patterns. By using the same words for each task, it was possible to assess the interrelationships among these skills on a word by word, child by child basis. A multivariate analysis of variance was conducted on difference scores among segmentation, reading, and spelling. Generally, differences favored segmentation and were maximized when final sounds were deleted and minimized when medial sounds were deleted. In addition, graphical analyses showed a greater probability of correct reading and spelling given correct segmentation than incorrect segmentation. Results were interpreted to support a computational notion of phonology as a prerequisite to reading and spelling, with a more reflective notion explaining the reciprocal relation between reading and segmentation of consonant blends and medial sounds.

Monitoring early reading development in first grade: Word identification fluency versus nonsense word fluency
Fuchs, LS (Fuchs, LS); Fuchs, D (Fuchs, D); Compton, DL (Compton, DL)

This study contrasts the validity of 2 early reading curriculum-based measurement (CBM) measures: word identification fluency and nonsense word fluency. At-risk children (n = 151) were assessed (a) on criterion reading measures in the fall and spring of first grade and (b) on the 2 CBM measures each week for 7 weeks and twice weekly for an additional 13 weeks. Concurrent and predictive validity for CBM performance level and predictive validity for CBM slopes demonstrated the superiority of word identification fluency over nonsense word fluency. Findings are discussed in terms of the measures' utility for identifying children in need of intensive instruction and for monitoring children's progress through first grade.

What's in a name? Preschoolers' noun learning performance in relation to their risk for reading disability
Gilliver, ML (Gilliver, Megan Louise)[2,1]; Byrne, B (Byrne, Brian)[2]

This paper reports the findings of an investigation aimed at gaining a clearer understanding of the nature of vocabulary difficulties associated with dyslexia and associated risk status. Three studies were conducted to examine preschoolers' access and mastery of syntactic- and phonological-based processes believed to support word learning. Results are reported for 82 participants whose (reading) risk status was assessed from a composite of measures known to be related to reading development. As expected, risk status correlated positively with participants' ability to recall the phonological form of novel nouns. No relationship was found between risk status and participants' use of syntactic form-class cues in interpreting the noun class of novel names in isolation. However, the ability to use form-class cues was impaired for at-risk participants on a task that required them to learn both the phonological form and noun class. Findings are discussed in relation to the suggestion that limitations in processing resources such as working memory rather than in the availability of language structures may be at the root of the reported poor performance by at-risk children on vocabulary and other linguistic measures.

Toward a technology for assessing basic early literacy skills
Kaminski, RA (Kaminski, RA); Good, RH (Good, RH)

This study examined the reliability validity, and sensitivity of experimental measures developed to assess three areas of early literacy: phonological awareness, vocabulary development, and fluency in letter naming. The measures were designed for repeated use to identify children with difficulty acquiring basic early literacy skills and to evaluate the effectiveness of interventions for these children. Subjects were 38 kindergarten and 40 first grade children. Results indicated that the measures displayed adequate psychometric properties for kindergarten children who were not yet reading. Reliabilities were moderate to high and evidence was obtained For the criterion-related validity of the measures. Sensitivity of the measures was supported, although further research is needed. As expected, the experimental measures were less useful for first graders who were reading well. Implications for practice are discussed.

The diagnostic assessment of word recognition and phonic skills in five-year-olds
Moseley, D (Moseley, D)
Parallel versions of a new multiple-choice word-recognition test were administered to 1019 and 590 Year-1 pupils respectively. The test format was based on a published test of Word Recognition and Phonic Skills and was intended to provide reliable diagnostic information. It was found that internally consistent measures of three types of word recognition error could be derived (relating to consonants, vowels and phoneme omission), but that scales for letter order errors were unreliable. Information about the length of words which an individual can usually recognise, the proportion of high frequency to low frequency words recognised and the relative ease of recognising regular and irregular words were also considered as having possible implications for teaching. Of these measures, only word length was found to be a strong independent predictor of word recognition. Implications of these findings for the future development of norm-referenced tests that at the same time provide objective feedback about individual strengths and weaknesses are discussed.

The Role of Environmental Print in Emergent Literacy (EJ975631)

Author(s):	Neumann, Michelle M.; Hood, Michelle; Ford, Ruth M.; Neumann, David L.	Pub Date:	2012-09-00
Source:	Journal of Early Childhood Literacy, v12 n3 p231-258 Sep 2012		

Abstract:
Young children are surrounded by environmental print on a daily basis. Through their visual exploration of environmental print, coupled with sociocultural experiences, children gain valuable semantic and symbolic knowledge as they make sense of their world. The aim of this review is to examine the question of whether environmental print has value as a literacy learning resource, and if so, the mechanisms by which it promotes literacy development. It is shown that interactions with environmental print in the child's sociocultural context can develop their logographic reading skills. These skills, in turn, promote the development of emergent literacy skills that are the precursors to conventional reading skills. Environmental print may also be used more directly when parents and childhood educators use it to scaffold the learning of emergent literacy skills. It is recommended that parents and early childhood educators capitalize on children's

natural attraction to environmental print by using it to promote their literacy development.

The Componental Model of Reading: Predicting First Grade Reading Performance of Culturally Diverse Students from Ecological, Psychological, and Cognitive Factors Assessed at Kindergarten Entry (EJ975633)

Abstract:
This study, framed by the component model of reading (CMR), examined the relative importance of kindergarten-entry predictors of first grade reading performance. Specifically, elements within the ecological domain included dialect, maternal education, amount of preschool, and home literacy; elements within the psychological domain included teacher-reported academic competence, social skills, and behavior; and elements within the cognitive domain included initial vocabulary, phonological, and morpho-syntactic skills, and alphabetic and word recognition skills. Data were obtained for 224 culturally diverse kindergarteners (58% Black, 34% White, and 8% Hispanic or other; 58% received free or reduced-price lunch) from a larger study conducted in seven predominantly high poverty schools (n = 20 classrooms) in a midsized city school district in northern Florida. Results from a hierarchical multiple regression (with variables in the ecological domain entered first, followed by the psychological and cognitive domains) revealed a model that explained roughly 56% of the variance in first grade reading achievement, using fall-of-kindergarten predictors. Letter-word reading and morpho-syntactic skill were the strongest significant predictors. The findings largely support the CMR model as a means to understand individual differences in reading acquisition and, in turn, to support data-based instructional decisions for a wider range of children.

A not-so-simple view of reading: how oral vocabulary and visual-word recognition complicate the story
Ouellette, G (Ouellette, Gene)[1]; Beers, A (Beers, Ashley)[1]
READING AND WRITING Volume: 23   Issue: 2   Pages: 189-208   DOI: 10.1007/s11145-008-9159-1   Published: FEB 2010
The present study sought to clarify the relations amongst serial decoding, irregular word recognition, listening comprehension, facets of oral vocabulary and reading comprehension in two cohorts of children differing in reading level. In the process, the components of the simple view of reading were evaluated. Students in grades 1 (n = 67) and 6 (n = 56) were assessed on measures of phonological awareness, decoding, irregular word recognition, listening comprehension, oral vocabulary, and reading comprehension. Even when all other measures were controlled, vocabulary was found to explain reading comprehension in grade 6 but not grade 1. Vocabulary also predicted decoding in grade 6 and irregular word recognition in both grades. These results are interpreted as supporting a not-so-simple view of the constructs underlying reading comprehension that acknowledges complex connections between print skills and oral language.

Knowledge about Word Structure in Beginning Readers: What Specific Links Are There with Word Reading and Spelling? (EJ974696)

Abstract:
The present study had two aims: (1) to examine kindergarten (Kg) and first grade (G1) children's early word structure knowledge, that is letter, phonological, morphological, and orthographic knowledge, and (2) to provide evidence of specific links between these various types of knowledge and word reading and spelling performance assessed in G1. A short longitudinal study was conducted with French-speaking children. Beyond phonological and morphological knowledge, identified here as in many other studies, the results provided evidence of a level of orthographic knowledge in the Kg children who exhibited an ability to process graphotactic constraints (i.e., legal combinations of letters). Moreover, whatever the type of items (affixed, pseudo-affixed, regular, or irregular words) being processed, either in reading or in spelling, letter naming was seen to be the strongest predictor of reading and spelling performance. The second important predictor related to phonological knowledge and more particularly phoneme extraction as a proximal predictor. Morphological knowledge appeared to be less important, and finally, the smallest contribution was made by orthographic knowledge.

Individual-Differences In 4-Year-Old Children's Acquisition Of Vocabulary During Storybook Reading
SENECHAL, M (SENECHAL, M); THOMAS, E (THOMAS, E); MONKER, JA (MONKER, JA)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 87   Issue: 2   Pages: 218-229
 DOI: 10.1037//0022-0663.87.2.218   Published: JUN 1995
Two experiments were conducted to assess how children who differ in vocabulary Knowledge learn new vocabulary incidentally from listening to stories read aloud. In both experiments, 4-year-old children were classified as having either high or low word knowledge on the basis of a median split of their Peabody Picture Vocabulary Test-Revised (PPVT-R) standard scores. In Experiment 1, children either listened passively or labeled pictures using novel words during the book readings. We found that children with larger vocabularies produced more novel words than did children with smaller vocabularies, and children who answered questions during the book readings comprehended and produced more words than did children who passively listened to the story. In Experiment 2, children either listened to readings of a book, pointed to pictures during the readings, or labeled pictures during the readings. Children with larger vocabularies comprehended more novel words than did children with smaller vocabularies. Children who actively participated by labeling or pointing learned more words than did children who listened passively to book readings. The findings clarify the role of active responding by demonstrating that verbal and nonverbal responding are effective means of enhancing vocabulary acquisition.

Vocabulary development of English-language and English-only learners in kindergarten
Silverman, RD (Silverman, Rebecca Deffes)
ELEMENTARY SCHOOL JOURNAL Volume: 107   Issue: 4   Pages: 365-383   DOI: 10.1086/516669   Published: MAR 2007
In this study I investigated the effectiveness of a kindergarten vocabulary intervention, developed based on previous research on characteristics of effective vocabulary intervention through storybook read-alouds, in 5 kindergarten classrooms. Among these classrooms were 3 mainstream, 1 two-way bilingual, and 1 structured immersion classroom. The

classrooms served 44 English-only (EO) and 28 English-language-learning (ELL) children. Linear growth analyses investigated children's learning of taught words, as assessed by a researcher-designed vocabulary measure, and their overall growth in vocabulary knowledge, measured by the Test of Language Development Primary:3. Findings showed that ELLs learned target words at the same rate, and grew in general vocabulary at a faster rate, than EOs.

Vocabulary Practices in Prekindergarten and Kindergarten Classrooms
Silverman, R (Silverman, Rebecca)[1]; Crandell, JD (Crandell, Jennifer DiBara)[2]
READING RESEARCH QUARTERLY Volume: 45   Issue: 3   Pages: 318-340   DOI: 10.1598/RRQ.45.3.3   Published: JUL-SEP 2010

Abstract: This article presents findings from a correlational study of the relationship between teachers' vocabulary instruction practices and prekindergarten and kindergarten children's vocabulary. We observed 16 teachers during three 90-minute language arts blocks, and we assessed the performance of their 244 children on target word knowledge and general vocabulary knowledge at the beginning and end of the year. Classrooms were observed during read-aloud time and non-read-aloud time. Results suggest that there are particular practices that are generally associated with higher vocabulary performance. In addition, there are some practices that appear associated with greater growth in vocabulary for children with higher initial vocabulary knowledge than for children with lower initial vocabulary knowledge. This study also shows that the effectiveness of some practices may be related to whether teachers use the practices during read-aloud time or during the non-read-aloud time of their language arts block and whether children are assessed on general vocabulary knowledge or target word knowledge.

The Influence Of Rate Of Presentation During Taped-Words Interventions On Reading Performance
SKINNER, CH (SKINNER, CH); JOHNSON, CW (JOHNSON, CW); LARKIN, MJ (LARKIN, MJ); LESSLEY, DJ (LESSLEY, DJ); GLOWACKI, ML (GLOWACKI, ML)
JOURNAL OF EMOTIONAL AND BEHAVIORAL DISORDERS Volume: 3   Issue: 4   Pages: 214-223   Published: OCT 1995

An adapted alternating treatments design was used to investigate the effects of two taped-words interventions on word list reading in three elementary students with behavioral and learning problems. Three equivalent sets of 15 unknown words were constructed and assigned to three different conditions: fast taped-words (FTW), slow taped-words (STW), and one of two assessment-only control conditions. During FTW, students were instructed to read aloud with an audiotape that delivered 15 words in 15 seconds (one word each second). During STW, 15 words were delivered in 75 seconds (one ward every 5 seconds). Both taped-words interventions resulted in greater increases in accuracy and rates of accurate reading than did control conditions. One student performed slightly better under FTW. The other two students performed better under STW. Results are discussed in terms of modeling accurate reading, modeling reading rates, pacing, and opportunities to respond.

Incidental word learning while reading: A meta-analysis
Swanborn, MSL (Swanborn, MSL); de Glopper, K (de Glopper, K)
REVIEW OF EDUCATIONAL RESEARCH Volume: 69   Issue: 3   Pages: 261-285   DOI: 10.2307/1170540   Published: FAL 1999

A meta-analysis of 20 experiments examining incidental word learning during normal reading shows that students learn around 15% of the unknown words they encounter A test of homogeneity indicates that study outcomes diverge, although their heterogeneity is relatively small (19%). An exploratory multi-level analysis of the variability in the results suggests that several factors affect the probability of learning an unknown word while reading: pretest sensitization, students' grade level, students' level of reading ability, the sensitivity of assessment methods to partial word knowledge, and the amount of text surrounding the

target words. A model that contains students' grade level and assessment methods' sensitivity to partial word knowledge predicts 66% of the systematic variance in the effect sizes. Implications for research and instruction are discussed.

Using Word Identification Fluency to Monitor First-Grade Reading Development
Zumeta, RO (Zumeta, Rebecca O.)[1]; Compton, DL (Compton, Donald L.)[1]; Fuchs, LS (Fuchs, Lynn S.)[1]
This Study assessed the effects of sampling breadth on technical features of word identification fluency (WIF), a tool for screening and monitoring the reading development of first graders. From a potential pool of 704 first-grade students, the authors measured both a representative sample (n = 284) and 2 other subgroups: those with low reading achievement (n = 202) and those with high/average achievement (n = 213). Data were collected weekly on broadly and narrowly sampled WIT lists for 15 weeks and on criterion measures in the fall and spring. Broad lists were developed by sampling words from 500 high-frequency words, whereas narrow lists were created by sampling from the 133 words from Dolch preprimer, primer, and first-grade word lists. Overall, predictive validity for performance level, predictive validity for growth, and commonality analysis showed narrow sampling was better for screening the representative group and the high/average subgroup. Broad sampling was superior for screening the low-achieving subgroup and for progress monitoring across groups.

Phonology

Decoding and sight-word naming: Are they independent components of word recognition skill?

Aaron, PG (Aaron, PG); Joshi, RM (Joshi, RM); Ayotollah, M (Ayotollah, M); Ellsberry, A (Ellsberry, A); Henderson, J (Henderson, J); Lindsey, K (Lindsey, K)

Word recognition skill is the foundation of the reading process. Word recognition could be accomplished by two major strategies: phonological decoding and sight-word reading, the latter being a marker for proficient reading. There is, however, a controversy regarding the relationship between decoding and sight-word reading, whether the two are independent or the latter is built on the foundations of the former. A related controversy about instructional strategy could be whether to use whole-word method to improve word recognition skills, or to first build decoding skills and then introduce sight words. Five goals were set up to address these issues: (a) developing a criterion that can be used easily by classroom teachers to assess sight-word reading ability, (b) examining this relationship between decoding and sight-word reading, (c) identifying the mechanism that can explain the relationship, (d) examining factors that facilitate sight-word reading, and (e) discussing potential instructional implications of these findings. In order to accomplish these goals, naming time and word-naming accuracy of three groups of subjects (elementary school children, children identified as having reading disability, and college students) were studied by using a variety of verbal materials. The over-all conclusions are that the difference in naming time of letters and words can be used as a metric for assessing sight-word reading skill. Sight-word reading appears to be intimately related to decoding. Sight-word reading is accomplished by parallel processing of constituent letters of words and is influenced also by the semantic nature of words. It is conjectured that sight-word reading instruction is likely to be successful if decoding skills are firmly established first.

Al Otaiba, S.a , Connor, C.a , Lane, H.b , Kosanovich, M.L.a , Schatschneider, C.a , Dyrlund, A.K.a , Miller, M.S.b , Wright, T.L.b

Reading First kindergarten classroom instruction and students' growth in phonological awareness and letter naming-decoding fluency

Florida State University, Florida Center for Reading Research, United States; University of Florida, United States

This study investigated the role of the amount, content, and implementation of reading instruction provided by 17 kindergarten teachers in eight Reading First elementary schools as it related to students' progress (n = 286 students) on early reading assessments of phonological awareness and letter naming-decoding fluency. Children's phonological awareness and letter naming-decoding fluency grew significantly from fall to spring. On average, across the three 60 min observations, teachers provided over 30 min a day of phonological awareness and phonics instruction and 15 min a day of vocabulary and comprehension instruction. Global ratings of instructional quality revealed two implementation factors: explicit and individualized implementation and meaningful interactions around text. Hierarchical linear modeling revealed that the amounts of specific instructional content, as well as how this instruction was implemented, was related to students' letter knowledge and phonological awareness skill growth.

Socioeconomic-Status Differences In Preschool Phonological Sensitivity And First-Grade Reading-Achievement

Two groups of 5-year-old children whose fathers' occupations differed markedly in education and skill levels were seen in preschool, where they were given tests of performance IQ, receptive vocabulary and grammar, verbal working memory, phonological sensitivity, letter knowledge, and novice reading ability. At the end of first grade, academic achievement was assessed. Marked group differences were observed on most measures. Most differences remained after performance IQ effects were controlled. When general verbal ability effects were controlled, differences in phonological sensitivity and word-level reading and arithmetic achievement remained. When phonological sensitivity effects were also controlled, differences remained only in arithmetic performance. The same general pattern of results was observed in converging hierarchical multiple regression analyses. Overall, the results are consistent with the view that socioeconomic status differences in word-level reading achievement are mediated partly through preexisting differences in phonological sensitivity.

Training Phonological Awareness - A Study With Inner-City Kindergarten-Children
A small-scale, longitudinal, phonological awareness training study with inner-city kindergarten children was conducted in four classrooms. The central goals of the study were the creation and evaluation of a phonological awareness training program and a preliminary look at the consequence of that training on basic phonological processes. Assessment of phonological awareness and basic phonological processes was carried out in the fall of the kindergarten year, and again in the spring following an 18 week training program which incorporated both auditory and articulatory techniques for fostering metaphonological development. Follow-up evaluation of promotion to first grade and of reading achievement took place a year later. The children in the two experimental classes receiving training had significantly greater gains in phonological awareness at the end of kindergarten, were significantly more likely to be promoted to first grade rather than to pre-one, and had a trend toward better reading skills in first grade than did the smaller group of children promoted to first grade from the control classes. In addition, there were some indications that development of phonological awareness was accompanied by changes in the underlying phonological system as well. Here we focus on the rationale and implementation of our training program and discuss the implications of the findings for a potential large-scale study.

Phonological awareness and early reading: A meta-analysis of experimental training studies
In a quantitative meta-analysis, the effects of phonological awareness training on reading were shown. In a homogeneous set of U.S. studies with a randomized or matched design, the combined effect sizes for phonological awareness and reading were $d = 0.73$ ($r = .34$, $N = 739$) and $d = 0.70$ ($r = .33$, $N = 745$), respectively. Thus, experimentally manipulated phonological awareness explains about 12% of the variance in word-identification skills. The combined effect size for long-term studies of the influence of phonological awareness training on reading was much smaller, $d = 0.16$ ($r = .08$, $N = 1,180$). Programs combining a phonological and a letter training were more effective than a purely phonological training. Furthermore, training effects were stronger with posttests assessing simple decoding skills than with real-word-identification tests. In sum, phonological awareness is an important but not a sufficient condition for early reading.

Recognition Of Phoneme Invariance By Beginning Readers - Confounding Effects Of Global Similarity

BYRNE, B (BYRNE, B); FIELDINGBARNSLEY, R (FIELDINGBARNSLEY, R)

This paper reports an experimental study of a possible confound in measures of young children's phoneme awareness - that of global similarity between words. We developed two otherwise identical versions of a test of phoneme invariance (typical item, 'which starts the same as beak, bowl or shed?'), one version controlling for global similarity and the other not. We administered both tests to 27 kindergarten children, along with three criterion measures of early literacy skill. Three converging results supported the importance of controlling for global similarity when attempting to measure phoneme invariance: (1) the subjects attained higher scores on the uncontrolled version, and half of those passing this version (11/22), were 'false positives' in that they did not pass the controlled version, (2) a metric of global similarity was significantly related to the proportion of children passing an item on both versions, and (3) there was a stronger relation between the controlled version and the criterion literacy measures of spelling and decoding than was found for the uncontrolled version. The educational implications of the results are discussed.

A longitudinal study of the effects of word frequency and rime-neighborhood size on beginning readers' rime reading accuracy in words and nonwords

Calhoon, JA (Calhoon, JA); Leslie, L (Leslie, L)

Beginning readers' rime reading accuracy was assessed over three years to examine the infuence of word frequency and rime-neighborhood size (the number of single syllable words with the same rime) on words presented in lists and stories. Twenty-seven 1st- and 2nd-grade students read 54 words and 27 nonwords containing rimes from different size neighborhoods. In Year 1, children showed effects of neighborhood size in high frequency words read in stories and in low-frequency words read in lists and stories. In Year 2, rimes from large neighborhoods were read more accurately than rimes from medium and small neighborhoods in high- and low-frequency words. In Year 3, no effects of rime-neighborhood size were found for high-frequency words, but effects on low-frequency words continued. These results support Leslie and Calhoon's (1995) developmental model of the effects of rime-neighborhood size and word frequency as a function of higher levels of word learning.

Cartledge, G.a , Yurick, A.b , Singh, A.H.a , Keyes, S.E.c , Kourea, L.d
Follow-up study of the effects of a supplemental early reading intervention on the reading/disability risk of urban primary learners
The Ohio State University, 350 PAES Bldg., 305 W. 17th Ave., Columbus, OH 43210-1224, United States; Cleveland State University, United States; Bluffton University, United States; European University-Cyprus, United States
Early intervention to mitigate special education and reading risk is especially critical for low socioeconomic and minority learners. This study examined the lasting effects of an early reading intervention package of phonemic awareness on the reading skills of 38 second-grade students one and two years after intervention ended. The participants were kindergarten through second grade low socioeconomic, racially diverse learners from three urban elementary schools. Assessments consisted of standardized annual pre- and posttests and Dynamic Indicators of Basic Early Literacy Skills regular measures. The findings showed beneficial effects of the early literacy interventions with strong responders attaining and maintaining benchmark status and with poorer responders needing more

intensive instruction to show continuous growth. On the other hand, initially low- risk (non-treatment) urban learners failed to maintain their early advantage over their higher risk peers, suggesting the need for more extensive monitoring and interventions within urban settings. The implications of these findings as well as directions for future research are discussed.

Phonological awareness skills in children: Examining performance across tasks and ages
Chafouleas, SM (Chafouleas, SM); Lewandowski, LJ (Lewandowski, LJ); Smith, CR (Smith, CR); Blachman, BA (Blachman, BA)

This study examined the performances of 171 children in kindergarten through second grade on 11 tasks of phonological awareness. The purpose was to assess phonological awareness skill acquisition across age and type of task. Results provided support for an ordering of tasks by difficulty, or age of mastery, as follows: rhyme, alliteration, blending, segmentation, manipulation. Performance on all of the tasks demonstrated rapid growth in 6-year-old children (first grade), and most tasks were mastered (90% correct) by the age of 7 years. The study also supports previous work indicating certain variables (i.e., age, verbal ability, letter-sound knowledge, reading skill) that are significantly related to performance on the phonological measures. Knowing the age at which students typically master these tasks and the order in which they acquire these skills should enhance our ability to assess both normal and delayed phonological awareness performance and help to inform instructional practices.

Chafouleas, S.M.a , Martens, B.K.b
Accuracy-based phonological awareness tasks: Are they reliable, efficient, and sensitive to growth?
(2002) School Psychology Quarterly, 17 (2), pp. 128-147.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
0037832255&partnerID=40&md5=b4cb313cf5b5070d070cb87809a7a404
University of Connecticut, Department of Educational Psychology, 249 Glenbrook Rd., Storrs, CT 06269-2064, United States;
Syracuse University, Syracuse, NY, United States
This two-experiment study examined the efficiency and sensitivity of five accuracy-based phonological awareness tasks (i.e., Rhyme-Providing, Sound-Providing, Blending, Segmentation, and Deletion) for monitoring the development of these skills in kindergarten and Grade 1 students. The first experiment examined responses to different numbers and types of items included in each phonological awareness task for their correspondence to responses obtained from a larger, more inclusive item pool. Results suggested that an internally consistent and valid measure of each skill included 10 items per task, each representing a different linguistic combination. The second experiment examined the interscorer reliability and concurrent validity of the five measures, and compared their sensitivity to growth. Sensitivity was examined by administering 12 alternate forms of the tasks once per week to 32 kindergarten and 35 Grade 1 students. Mean slopes computed for each task suggested positive growth across all tasks and grades. Mean kindergarten slopes were significantly steeper than mean Grade 1 slopes for each of the five tasks, whereas the most sensitive task for both kindergarten and grade 1 students was Segmentation. The implications of these results are discussed for using accuracy-based measures of phonological awareness skills as part of a comprehensive assessment of young children's reading gains over time.

Distinctive patterns of relationship of phonological awareness and working memory with reading development
Cormier, P (Cormier, P); Dea, S (Dea, S)

The purpose of this study was to assess the contributions of specific components of verbal and nonverbal working memory and of phonological awareness to the prediction of reading achievement. One hundred and three children from grades 1, 2, and 3 were administered a measure of phonological awareness, four measures of working memory, four measures of academic achievement, and a measure of verbal intelligence. Separate multiple regression analyses controlling for the effects of age, sex and verbal intelligence showed that tests of verbal memory and of direct recall significantly predicted reading and spelling achievement whereas tests of backward recall significantly predicted only pseudoword identification. Phonological awareness was also found to relate significantly to reading and spelling achievement even when working memory was partialled out. Thus, phonological awareness and measures of working memory predicted specific and significant amounts of variance in reading and spelling achievement. Further, none of these measures were specifically related to arithmetic achievement. The specific roles of phonological awareness and working memory in reading development are examined in the discussion.

Motion detection, letter position encoding, and single word reading
Cornelissen, PL (Cornelissen, PL); Hansen, PC (Hansen, PC)
Recent research has shown that many people with dyslexia find it unusually difficult to detect flickering or moving visual stimuli, consistent with impaired processing in the magnocellular visual stream. Nonetheless, it remains controversial to suggest that reduced visual sensitivity of this kind might affect reading. We first show that the accuracy of letter position encoding may depend on input from the magnocellular pathway. We then suggest that when children read, impaired magnocellular function may degrade information about where letters are positioned with respect to each other, leading to reading errors which contain sounds not represented in the printed word. We call these orthographically inconsistent nonsense errors letter errors. In an unselected sample of primary school children, we show that the probability of children making "letter" errors in a single word reading task was best explained by independent contributions from motion detection (magnocellular function) and phonological awareness (assessed by a spoonerism task). This result held even when controlling for chronological age, reading ability, and IQ. Together, these findings suggest that impaired magnocellular visual function, as well as phonological deficits, may affect reading.

Coventry, W.L.a , Byrne, B.a , Olson, R.K.b , Corley, R.b , Samuelsson, S.c d
Dynamic and static assessment of phonological awareness in preschool: A behavior-genetic study
University of New England, Armidale, NSW, Australia; University of Colorado Boulder, Boulder, CO, United States; Linköping University, Linköping, Sweden; University of Stavanger, Stavanger, Norway
The genetic and environmental overlap between static and dynamic measures of preschool phonological awareness (PA) and their relation to preschool letter knowledge (LK) and kindergarten reading were examined using monozygotic and dizygotic twin children (maximum N = 1,988). The static tests were those typically used to assess a child's current level of PA such as blending and elision, and the dynamic test included instruction in phoneme identity to assess the child's ability to respond to this instruction. Both forms were influenced by genes and by shared and nonshared environment. The static and dynamic versions were influenced by the same genes, and part of the total genetic influence was

shared with LK. They were subject to both overlapping and independent shared environment influences, with the component in common also affecting LK. Nonshared environment influences were mostly independent. Scores from dynamic assessment added only minimally to variance explained in kindergarten reading after LK and static assessment had been factored in. Although one of the genetic factors that influenced both forms of PA also affected kindergarten reading, it was only the one shared with LK. The authors conclude that dynamic assessment of PA in preschool offers little advantage over the more commonly used static forms, especially if LK scores are available, although they acknowledge its potential in cases of preschool educational disadvantage.

Cronin, V., Carver, P.
Phonological sensitivity, rapid naming, and beginning reading
(1998) Applied Psycholinguistics, 19 (3), pp. 447-461.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0032349330&partnerID=40&md5=381eea7dada78980e0fde902b8e8e80e
Mount Saint Vincent University, Halifax, NS B3M 2J6, Canada
Reading acquisition was related to phonological sensitivity and rapid naming in a longitudinal study with young children. Phonological assessment consisted of rhyme and initial consonant discrimination, while the rapid naming tasks were made up of pictures, letters, and numbers. The subjects were 95 children from two grade levels, primary and first grade. They were tested in the fall and spring of the first year and the spring of the second year. It was found that the phonological and rapid naming tests each predicted unique variance in reading attainment, as measured at the end of the second year of the study. The rapid naming responses became more automatic early in the first grade year, while naming times generally became faster. Although many researchers regard rapid naming as part of the phonological core, the present article discusses the various advantages of considering rapid naming as a separate factor in reading development.

Cummings, K.D.a , Kaminski, R.A.b , Good III, R.H.a b , O'Neil, M.a b
Assessing phonemic awareness in preschool and kindergarten: Development and initial validation of First Sound Fluency
(2011) Assessment for Effective Intervention, 36 (2), pp. 94-106.
http://www.scopus.com/inward/record.url?eid=2-s2.0-79955993146&partnerID=40&md5=704dcbd77b3da7a0827eaebb6290cecf
University of Oregon, Center on Teaching and Learning, 5292, Eugene, OR 97403-5292, United States; Dynamic Measurement Group, Eugene, OR, United States
This article presents initial findings from a study examining First Sound Fluency (FSF), which is a brief measure of early phonemic awareness (PA) skills. Students in prekindergarten and kindergarten (preK and K) were assessed three times (fall, winter, and spring) over one school year, which resulted in multiple reliability and validity coefficients. In addition, a subset of students in both preK and K was assessed monthly between benchmark periods using alternate forms of the FSF measure to estimate delayed alternate-form reliability. The FSF measure displayed adequate reliability and validity for decision making in early literacy for students in both grades. Implications of these findings are discussed.

Assessing decoding from an onset-rime perspective
Cunningham, JW (Cunningham, JW); Erickson, KA (Erickson, KA); Spadorcia, SA (Spadorcia, SA); Koppenhaver, DA (Koppenhaver, DA); Cunningham, PM (Cunningham, PM); Yoder, DE (Yoder, DE); McKenna, MC (McKenna, MC)
JOURNAL OF LITERACY RESEARCH Volume: 31   Issue: 4   Pages: 391-414   Published: DEC 1999
This study investigated decoding assessment from an onset-rime perspective, and consistent with an interactive model of cognitive constructs underlying silent reading comprehension. Participants were 128 first and second graders in a public elementary

school. Two kinds of decoding items were examined: one-syllable words and nonwords, each comprised of a high- to moderate-utility onset and a high-utility rime. Data were analyzed mainly with stepwise multiple regression and conditional probability analyses. The principal finding was that the construct validity of decoding items varied depending on whether they were words or nonwords. Tests of knowledge of onsets and rimes accounted for 14% more variance in real-word test than nonword rest scores. The superior construct validity of words over nonwords as decoding items seemed to occur because decoding nonwords requires an additional ability that decoding real words does not.

Phonics instruction and student achievement in whole language first-grade classrooms
Dahl, KL (Dahl, KL); Scharer, PL (Scharer, PL); Lawson, LL (Lawson, LL); Grogan, PR (Grogan, PR)
READING RESEARCH QUARTERLY Volume: 34   Issue: 3   Pages: 312-341   DOI: 10.1598/RRQ.34.3.4   Published: JUL-SEP 1999
This study analyzed phonics teaching and learning in eight whole language first grades from october through may. Documentation included field notes of weekly half-day observations merged with transcriptions of teacher/student interactions during phonics instruction. Findings indicated that foundation concepts (phonemic and phonological awareness, phonemic segmentation) and letter-sound relationships were taught. Strategies were presented in tandem with skills. Phonics instruction occurred in various reading and writing activities typical of whole language classrooms. The writing program was a key phonics instructional context. Teachers differentiated phonics instruction based on learner development and ongoing assessments. During reading and writing conferences teachers documented student progress. They provided differentiated instruction across various contexts. Four pre and post assessments measuring encoding and decoding in isolation and in context documented achievement gains for 178 students. Pretest scores (range of 0-37) on Hearing and Recording Sounds in Words (HRSW) grouped students into three statistically contrasting clusters. Scores from the three remaining assessments were scaled together using the Rasch model to determine composite pre and post achievement scores. Comparison of pre and post scores using Rasch scaling documented gains in encoding and decoding knowledge. Group 1 (N = 123) demonstrated high pretest scores (HRSW 27-37) and achieved mean posttest Text Reading Level scores equivalent to Grade 5 (Composite gain = 7.15). Statistically comparable gains (6.08) were achieved by 13 students with limited HRSW pretest scores (2-14) and posttest Text Reading Level scores equivalent to preprimer texts. Highest gains (8.61) were achieved by 42 students (pretest HRSW 15-26) with posttest Text Reading Level scores equivalent to Grade 1 readers.

Specific contributions of phonological abilities to early reading acquisition: Results from a Dutch latent variable longitudinal study
de Jong, PF (de Jong, PF); van der Leij, A (van der Leij, A)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 91   Issue: 3   Pages: 450-476   DOI: 10.1037/0022-0663.91.3.450   Published: SEP 1999
Contributions of phonological abilities to early reading acquisition were examined in a longitudinal study of 166 Dutch children from kindergarten through 2nd grade. Various phonological abilities, nonverbal intelligence, vocabulary, and letter knowledge were assessed in kindergarten and Grade 1. Reading and arithmetic were examined in Ist and 2nd grades. The importance of individual differences in phonological ability for subsequent reading acquisition changed over time. At first, the effects of phonological abilities increased, but after Grade 1, these effects disappeared. Phonological awareness and rapid naming had independent and specific influences on reading achievement. Verbal working memory was associated with both reading and arithmetic acquisition. The results tend to support an interactive view of the relation between development of phonological abilities and learning to read.

Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis

Ehri, LC (Ehri, LC); Nunes, SR (Nunes, SR); Willows, DM (Willows, DM); Schuster, BV (Schuster, BV); Yaghoub-Zadeh, Z (Yaghoub-Zadeh, Z); Shanahan, T (Shanahan, T)

A quantitative meta-analysis evaluating the effects of phonemic awareness (PA) instruction on learning to read and spell was conducted by the National Reading Panel. There were 52 studies published in peer-reviewed journals, and these contributed 96 cases comparing the outcomes of treatment and control groups. Analysis of effect sizes revealed that the impact of PA instruction on helping children acquire PA was large and statistically significant (d = 0.86). PA instruction exerted a moderate, statistically significant impact oil reading (d = 0.53) and spelling (d = 0.59). Not only word reading but also reading comprehension benefited. PA instruction impacted reading under all the conditions examined although effect sizes were larger under some conditions. PA instruction helped various types of children: normally developing readers as well as at-risk and disabled readers: preschoolers, kindergartners, and first graders: low socioeconomic status children as well as mid-high SES. PA instruction improved reading, but it did not improve spelling in disabled readers. PA instruction was more effective when it was taught with letters than without letters, when one or two PA skills were taught than Multiple PA skills, when children were taught in small groups than individually or in classrooms, and when instruction lasted between 5 and 18 hours rather than longer, Classroom teachers were effective in teaching PA to their Students. Effect sizes were larger for Studies using more rigorous experimental designs, with rigor assessments drawn from Troia (1999), In Sum, PA instruction was found to make a statistically significant contribution to reading acquisition.

Effects of different teaching methods on phonological awareness and on literacy skills in first grade

Einsiedler, W (Einsiedler, W); Frank, A (Frank, A); Kirschhock, EM (Kirschhock, EM); Martschinke, S (Martschinke, S); Treinies, G (Treinies, G)

Different methods of elementary literacy instruction were studied in their effects on phonological awareness and on reading and spelling during first grade. Five classes received a phonological awareness training, five classes implemented an open concept of learning to read and to write, and five classes were taught in the traditional way with a primer. Phonological awareness was assessed at the beginning of the school year (t(1), N = 375), and at mid-term (t(2), N = 364). At the end of the school year (t(3), N = 351), standardized reading and spelling tests were used. Phonological awareness training appeared to favor low-achieving children. As an effect on reading and spelling outcomes at the end of the first grade a main effect yielded in favor of the training classes.

Letter names, letter sounds and phonological awareness: an examination of kindergarten children across letters and of letters across children

Evans, MA (Evans, Mary Ann); Bell, M (Bell, Michelle); Shaw, D (Shaw, Deborah); Moretti, S (Moretti, Shelley); Page, J (Page, Jodi)

In this study 149 kindergarten children were assessed for knowledge of letter names and letter sounds, phonological awareness, and cognitive abilities. Through this it examined child and letter characteristics influencing the acquisition of alphabetic knowledge in a naturalistic context, the relationship between letter-sound knowledge and letter-name knowledge, and the prediction of Grade 1 phonological awareness and word identification from these variables. Knowledge of letter sounds was better for vowels and for letters with consonant-

vowel names than for those with vowel-consonant names or names bearing little relationship to their sounds. However, there were anomalies within each category reflecting characteristics of the individual letters. Structural equation modelling showed that cognitive ability, comprising receptive vocabulary, non-verbal reasoning, rapid automatized naming of colours, and phonological memory significantly contributed to alphabetic knowledge and phonological awareness. In turn, letter-name knowledge but not phonological awareness predicted letter-sound knowledge and subsequent reading skill.

Rhyme and alliteration sensitivity and relevant experiences among preschoolers from diverse backgrounds
Fernandez-Fein, S (Fernandez-Fein, S); Baker, L (Baker, L)
JOURNAL OF LITERACY RESEARCH Volume: 29   Issue: 3   Pages: 433-459   Published: SEP 1997
There exists a well-established positive relation between phonological awareness and learning to read. Experiences with linguistic routines like nursery rhymes may provide one route through which children gain phonological awareness. The phonological awareness and home experiences of 59 prekindergartners from different sociocultural groups were examined. Performance differences favoring middle-income children over their low-income counterparts were obtained on tasks assessing rhyme and alliteration sensitivity and nursery-rhyme knowledge. Middle-income children also engaged more frequently than low-income children in word games and book interactions at home. The only significant difference among children of the same income level was that African-American low-income children displayed lower levels of nursery-rhyme knowledge than European-American low-income children. Two demographic variables, maternal education and ethnicity, made significant contributions to rhyme sensitivity. Among the experiential variables, the strongest correlates of rhyme sensitivity were nursery-rhyme knowledge and frequency of engagement in word games and book interactions. The results suggest that children's rhyme sensitivity may be influenced by engagement in word games and book interactions that foster knowledge of linguistic routines containing rhyme.

Links Among Segmenting, Spelling, And Reading Words In 1st And 2nd Grades
FOORMAN, BR (FOORMAN, BR); JENKINS, L (JENKINS, L); FRANCIS, DJ (FRANCIS, DJ)
READING AND WRITING Volume: 5   Issue: 1   Pages: 1-15   DOI: 10.1007/BF01026915
 Published: MAR 1993
Twenty first graders and twenty second graders were examined on skills in segmenting, reading, and spelling 50 words with regular and exceptional spelling patterns. By using the same words for each task, it was possible to assess the interrelationships among these skills on a word by word, child by child basis. A multivariate analysis of variance was conducted on difference scores among segmentation, reading, and spelling. Generally, differences favored segmentation and were maximized when final sounds were deleted and minimized when medial sounds were deleted. In addition, graphical analyses showed a greater probability of correct reading and spelling given correct segmentation than incorrect segmentation. Results were interpreted to support a computational notion of phonology as a prerequisite to reading and spelling, with a more reflective notion explaining the reciprocal relation between reading and segmentation of consonant blends and medial sounds.

Foorman, B.R.a c , Chen, D.-T.b , Carlson, C.b , Moats, L.a , Francis, D.J.b , Fletcher, J.M.a
The necessity of the alphabetic principle to phonemic awareness instruction
(2003) Reading and Writing, 16 (4), pp. 289-324.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
0242574158&partnerID=40&md5=f4a5c41b25ed147d0c35e8ce001bacdc
Univ. Texas-Houston Hlth. Sci. Ctr., Ctr. for Academic and Reading Skills, Houston, TX, United States; University of Houston, Texas Inst. for Msrmt., Eval./Stat., Houston, TX, United

States; Department of Pediatrics, Univ. Texas-Houston Hlth. Sci. Ctr., UCT 2443, 7000 Fannin, Houston, TX 77030, United States

This investigation examined the extent to which curricular choice and incorporation of phonemic awareness (PA) into the kindergarten curriculum affects growth in kindergarten literacy skills and first-grade reading and spelling outcomes in 114 classrooms in 32 Title 1 schools for 4,872 children (85% African American). Literacy curricula were described as having more or less teacher choice and more or less PA and were implemented with ongoing professional development. Observations of curriculum fidelities and ratings of student behavior were also obtained. Alphabetic instruction without PA was not as effective as alphabetic instruction with PA. However, effective instruction in PA and alphabetic coding appeared to be as much a consequence of ongoing professional development as it was a function of prescribed PA activities. Results provide large-scale classroom support for findings on PA reported by the National Reading Panel [(2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.

Gilbertson, M.a , Bramlett, R.K.b c
Phonological awareness screening to identify at-risk readers: Implications for practitioners
(1998) Language, Speech, and Hearing Services in Schools, 29 (2), pp. 109-116.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
0032221369&partnerID=40&md5=c1bdaa212bc70dbc0cb5325623e703a3
Kids' SPOT, Little Rock, AR, United States; University of Central Arkansas, Conway, AR, United States; Box 4915, University of Central Arkansas, 201 Donaghey, Conway, AR 72035, United States

The purpose of this study was to investigate informal phonological awareness measures as predictors of first-grade broad reading ability. Subjects were 91 former Head Start students who were administered slandardized assessments of cognitive ability and receptive vocabulary, and informal phonological awareness measures during kindergarten and early first grade. Regression analyses indicated that three phonological awareness tasks, Invented Spelling, Categorization, and Blending, were the most predictive of standardized reading measures obtained at the end of first grade. Discriminant analyses indicated that these three phonological awareness tasks correctly identified at-risk students with 92% accuracy. Clinical use of a cutoff score for these measures is suggested, along with general intervention guidelines for practicing clinicians.

Hogan, T.P.a b , Catts, H.W.a , Little, T.D.a
The relationship between phonological awareness and reading: Implications for the assessment of phonological awareness
(2005) Language, Speech, and Hearing Services in Schools, 36 (4), pp. 285-293.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
27844552423&partnerID=40&md5=04cb2c4d653dccbe57bc63065393a76c
University of Kansas, Lawrence, KS, United States; Department of Speech, Language, Hearing, University of Kansas, 3001 Dole Human Development Center, 1000 Sunnyside Avenue, Lawrence, KS 66045-7555, United States

Purpose: Speech-language pathologists (SLPs) use phonological awareness assessments in many ways. This study examines the usefulness of these assessments in kindergarten and 2nd grade. Method: Measures of phonological awareness and letter identification were administered in kindergarten, and measures of phonological awareness, phonetic decoding (i.e., nonword reading), and word reading were administered in 2nd and 4th grades to a sample of 570 children participating in a longitudinal study of reading and language impairments. Results: A path analysis indicated that kindergarten measures of phonological awareness and letter identification provided information to the prediction of 2nd-grade reading. In 2nd grade, measures of reading offered information to the prediction of 4th-grade reading. Additionally, a reciprocal relationship was found between phonological awareness

and word reading, with kindergarten phonological awareness predicting 2nd-grade word reading and, conversely, 2nd-grade word reading predicting 4th-grade phonological awareness. Clinical Implications: Phonological awareness assessment provides information about reading in kindergarten but loses its predictive power at 2nd grade. At that time, phonological awareness and word reading become so highly correlated that phonological awareness does not add information to the prediction of 4th-grade reading.

An Examination Of Phonemic Processing Abilities In Children During Their 1st-Grade Year
HURFORD, DP (HURFORD, DP); DARROW, LJ (DARROW, LJ); EDWARDS, TL (EDWARDS, TL); HOWERTON, CJ (HOWERTON, CJ); MOTE, CR (MOTE, CR); SCHAUF, JD (SCHAUF, JD); COFFEY, P (COFFEY, P)
JOURNAL OF LEARNING DISABILITIES Volume: 26   Issue: 3   Pages: 167-177   Published: MAR 1993
The present study examined the development of reading and phonological processing abilities of 209 first graders (118 males, 91 females; mean age = 86.7 months) assessed during the first and last quarters of their first-grade year. The children were arranged into three different groups based on their Time 2 reading and intelligence data (children with and without reading disabilities, and "garden-variety" poor readers). Analyses indicated that the children with reading disabilities and the garden-variety poor readers did not differ significantly on many of the tasks, but both performed differently than the children without reading disabilities. Developmental analyses indicated that all three groups increased their reading and phonological skills; however, the gap between the performance of the children without reading disabilities and the other two groups widened from Time 1 to Time 2. The most important finding of the present study concerned the classification results of the discriminant analysis, which correctly identified the group membership of 207 of the 209 children (99.04% correct).

Early Identification And Remediation Of Phonological-Processing Deficits In 1st-Grade Children At Risk For Reading Disabilities
HURFORD, DP (HURFORD, DP); JOHNSTON, M (JOHNSTON, M); NEPOTE, P (NEPOTE, P); HAMPTON, S (HAMPTON, S); MOORE, S (MOORE, S); NEAL, J (NEAL, J); MUELLER, A (MUELLER, A); MCGEORGE, K (MCGEORGE, K); HUFF, L (HUFF, L); AWAD, A (AWAD, A); TATRO, C (TATRO, C); JULIANO, C (JULIANO, C); HUFFMAN, D (HUFFMAN, D)
JOURNAL OF LEARNING DISABILITIES Volume: 27   Issue: 10   Pages: 647-659   Published: DEC 1994
The present study assessed 486 first-quarter first graders on their reading and phonological-processing skills and intelligence. Based on this assessment, and using the classification data from Hurford et al.'s (1993) study, 99 children were identified as being at risk for reading difficulties: 53 children at risk for reading disabilities (RD) and 46 children at risk for becoming "garden-variety" poor readers (GV). Half of the RD and GV groups received the phonological-processing intervention. Posttraining assessment indicated that the training procedure not only was effective in increasing the phonological-processing skills of the trained participants, but also increased their reading ability. Both of the RD and GV trained groups benefited from the training. Analyses also indicated that the initial screening device was somewhat less accurate in the present study in identifying at-risk children than in our previous studies (85% vs. approximately 98%, respectively). The results of the present study indicate that it is possible to identify children at risk for reading difficulties and to significantly improve their phonological-processing and reading abilities.

Knowledge of the alphabet and explicit awareness of phonemes in pre-readers: The nature of the relationship
Johnston, RS (Johnston, RS); Anderson, M (Anderson, M); Holligan, C (Holligan, C)

This study was carried out to examine the extent to which preschool children are aware of the phonemic structure of the spoken word and to investigate how they acquire that knowledge. The four year old non-readers carried out a battery of tasks designed to assess product name reading ability, knowledge of the alphabet, rhyme skills and explicit phonemic awareness ability. There was evidence that they generally acquired knowledge of the alphabet before they showed explicit phonemic awareness ability. Fixed order regression analyses showed that ability to read and write the alphabet generally accounted for unique variance in phoneme awareness and product name reading ability over and above that accounted for by rhyme skills but that rhyme ability accounted for no unique variance beyond that accounted for by alphabet knowledge. Further analyses showed that alphabet knowledge also contributed unique variance to product name reading ability over and above that accounted for by phonemic awareness ability but that the reverse was not the case. It was hypothesised that many preschool non-readers may start to gain an insight into the phonemic structure of the spoken word by becoming aware of the connection between the sounds of letters in environmental print and the sounds of the spoken word.

Joseph, L.M.a c , McCachran, M.E.a , Naglieri, J.A.b
PASS cognitive processes, phonological processes, and basic reading performance for a sample of referred primary-grade children
Ohio State University, United States; George Mason University, United States; College of Education, Ohio State University, 288B Arps Hall, 1945 North High St., Columbus, OH, United States
The purpose of this study was to explore the relationships among cognitive processing, phonological processing and basic reading skill performance. Cognitive theorists propose that Planning, Attention, Simultaneous and Successive (PASS) processes are related to various phonological skills. A sample of 62 Primary Grade children referred for reading problems were administered measures of cognitive processes (Cognitive Assessment System), phonological processes (Comprehensive Test of Phonological Processing) and basic reading achievement (Woodcock-Johnson Tests of Academic Achievement-III). Findings indicated that some cognitive processes were significantly related to phonological processes as well as basic reading skills. The strongest relationships were found between phonological memory and successive processes and between phonological awareness and basic reading performance.

Toward a technology for assessing basic early literacy skills
Kaminski, RA (Kaminski, RA); Good, RH (Good, RH)
This study examined the reliability validity, and sensitivity of experimental measures developed to assess three areas of early literacy: phonological awareness, vocabulary development, and fluency in letter naming. The measures were designed for repeated use to identify children with difficulty acquiring basic early literacy skills and to evaluate the effectiveness of interventions for these children. Subjects were 38 kindergarten and 40 first grade children. Results indicated that the measures displayed adequate psychometric properties for kindergarten children who were not yet reading. Reliabilities were moderate to high and evidence was obtained For the criterion-related validity of the measures. Sensitivity of the measures was supported, although further research is needed. As expected, the experimental measures were less useful for first graders who were reading well. Implications for practice are discussed

The diagnostic assessment of word recognition and phonic skills in five-year-olds
Moseley, D (Moseley, D)
Parallel versions of a new multiple-choice word-recognition test were administered to 1019 and 590 Year-1 pupils respectively. The test format was based on a published test of Word Recognition and Phonic Skills and was intended to provide reliable diagnostic information. It was found that internally consistent measures of three types of word recognition error could be derived (relating to consonants, vowels and phoneme omission), but that scales for letter order errors were unreliable. Information about the length of words which an individual can usually recognise, the proportion of high frequency to low frequency words recognised and the relative ease of recognising regular and irregular words were also considered as having possible implications for teaching. Of these measures, only word length was found to be a strong independent predictor of word recognition. Implications of these findings for the future development of norm-referenced tests that at the same time provide objective feedback about individual strengths and weaknesses are discussed.

Phonological Awareness As Predictor For Reading And Spelling Abilities After 2, 3 And 4 Years Of Reading-Instruction
LANDERL, K (LANDERL, K); WIMMER, H (WIMMER, H)
Children's reading and spelling abilities were assessed at the end of grades two, three and four. It was found that phoneme substitution continued to predict differences in reading and spelling abilities in grades two and three and partly in grade four. Furthermore, rhyme oddity detection was a substantial predictor for reading and spelling abilities in grades two and three. Phonological awareness is not only relevant for the acquisition of an indirect reading and spelling strategy, but also for the development of an orthographic lexicon on which fast, direct reading and orthographically correct spelling are based. Of special interest is the difference in prediction between phoneme substitution and rhyme oddity detection. While differences in phoneme substitution predicted differences both in indirect and direct reading, rhyme oddity detection was only predictive for direct reading. Raven-IQ, onset oddity detection, nonword repetition and two visual tasks did not show substantial relationships with reading and spelling.

Issues In Phonological Awareness Assessment
LINDAMOOD, PC (LINDAMOOD, PC); BELL, N (BELL, N); LINDAMOOD, P (LINDAMOOD, P)
Awareness of the internal phonological structure of words is a causal factor in success with the alphabetic principle in word recognition. However, findings with the Lindamood Auditory Conceptualization (LAC) Test reveal 25-30% of the population show deficiency in a subtle component of phonological awareness termed comparator function. We argue that this comparator function-an ability to hold the phoneme and/or syllable segments of two phonological structures in mind and compare and represent any variations in the number, identity, or order of their segments - is a primary sensory-cognitive function underlying the secondary function of self-correction in word recognition and spelling. And since word recognition correlates highly with comprehension, comparator function also indirectly impacts this basic purpose for reading. We suggest that the needs of many individuals, including educators themselves, for development and refinement of phonological awareness/comparator function may be misdiagnosed and underaddressed unless more sensitive measures of phonological awareness are used. The consequence of inadequate

assessment/remediation of these deficiencies in educators is that they may be less able to assess and address these deficiencies in their students. Standard phonics instruction is known to be ineffective in developing phonological awareness for many individuals. However, phonological deficits can be addressed both preventively and remedially using procedures that are fundamentally different from typical phonics instruction.

Linklater, D.L., O'Connor, R.E., Palardy, G.J.
Kindergarten literacy assessment of English Only and English language learner students: An examination of the predictive validity of three phonemic awareness measures
(2009) Journal of School Psychology, 47 (6), pp. 369-394.
http://www.scopus.com/inward/record.url?eid=2-s2.0-70350072315&partnerID=40&md5=6245cddf7feef371e613218f527fdbe6
Graduate School of Education, University of California, Riverside, United States
The study assessed the ability of English phonemic awareness measures to predict kindergarten reading performance and determine factors that contributed to growth trajectories on those measures for English Only (EO) and English language learner (ELL) students. Using initial sound fluency (ISF), phoneme segmentation fluency (PSF), and a combined phoneme segmentation task (CPST), students' beginning of kindergarten scores were used to predict end-of-kindergarten Nonsense Word Fluency (NWF) and reading (WRMT-R/NU). Regression analyses revealed that ISF and CPST early in kindergarten predicted variance in NWF and WRMT-R/NU. PSF did not predict reading performance over ISF or CPST. While gender was a significant factor in the growth curves across the measures, results revealed no significant difference for EO and ELL students.

Development of phonological sensitivity in 2- to 5-year-old children
Lonigan, CJ (Lonigan, CJ); Burgess, SR (Burgess, SR); Anthony, JL (Anthony, JL); Barker, TA (Barker, TA)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 90   Issue: 2   Pages: 294-311
  DOI: 10.1037/0022-0663.90.2.294   Published: JUN 1998
This study examined phonological sensitivity in 238 children from middle- to upper-income families and 118 children from lower-income families across different levels of Linguistic complexity. Children ranged in age from 2 to 5 years. Overall, the results indicated that as children increased in age, phonological sensitivity both increased in absolute terms and became more stable. Significant social class differences in growth of phonological sensitivity were also obtained. Phonological sensitivity at different levels of linguistic complexity (e.g., syllables, phonemes) was substantially interrelated at each age and predicted word reading ability in older children independently of language skills and letter knowledge. These results indicate that phonological sensitivity can be assessed in young preschool children and that lower levels of phonological sensitivity may serve as developmental precursors to higher levels of phonological sensitivity.

The Relationship Between Phonological Awareness And Reading And Spelling Achievement 11 Years Later
MACDONALD, GW (MACDONALD, GW); CORNWALL, A (CORNWALL, A)
JOURNAL OF LEARNING DISABILITIES Volume: 28   Issue: 8   Pages: 523-527
  Published: OCT 1995
This study reports follow-up data from 24 teenagers (mean age = 17 years; 11 boys and 13 girls) who had participated in a study of phonological analysis and reading and spelling abilities 11 years earlier, when they were enrolled in kindergarten. The results indicated that phonological awareness ability assessed during kindergarten (via the Auditory Analysis Test) was a significant predictor of word identification and spelling skills 11 years later, when both socioeconomic status and vocabulary development were controlled. In contrast, socioeconomic status, vocabulary development, word recognition, and spelling achievement assessed at kindergarten were not significantly correlated with reading and spelling

achievement 11 years later. Results are discussed regarding the relative stability of phonological awareness and the importance of this awareness as a precursor to the development of word identification and spelling skills.

The prediction of early reading and spelling difficulties: Phonological deficits as predictors
Mayringer, H (Mayringer, H); Wimmer, H (Wimmer, H); Landerl, K (Landerl, K)
ZEITSCHRIFT FUR ENTWICKLUNGSPSYCHOLOGIE UND PADAGOGISCHE PSYCHOLOGIE Volume: 30   Issue: 2   Pages: 57-69   Published: 1998
The predictive contribution of phonological skills at school entry to reading and spelling performance at the end of Grade 1 was examined with a sample of about 560 boys. The main concern was the coincidence between poor phonological skills and later problems in reading or spelling. Various analyses consistently indicated a rather feeble association between phonological skills and literacy achievement. Most of the children with poor phonological skills were able to read and to spell within the normal range at the end of Grade 1. As a possible reason for the low predictive value of phonological skills in the present study the early assessment of reading and spelling along with a very slowly progressing phonologically oriented instruction is discussed.

The Structure of Phonological Processing and Its Relationship to Basic Reading (EJ973596)

Author(s):	Nelson, Jason M.; Lindstrom, Jennifer H.; Lindstrom, Will; Denis, Daniel	Pub Date:	2012-00-00
Source:	Exceptionality, v20 n3 p179-196 2012		

Abstract:
We investigated various structural models of phonological processing and the relationship of phonological processing abilities to basic reading. Data were collected on 116 kindergarten and first grade students. The specific ability model, which included phonological awareness, phonological memory, and rapid automatized naming as separate abilities, had the strongest fit to the data. Of the specific phonological processing abilities, rapid automatized naming was least associated with a second-order factor. Phonological awareness and rapid automatized naming accounted for variance in word reading, although the latter demonstrated limited practical utility. Theoretical and practical implications are discussed.

The Incorporation of a Phonemic Awareness Curriculum and Its Effects on Early Literacy Skills for Special Education Students (ED529137)

Author(s):	Nespoli, Jaclyn	Pub Date:	2011-00-00
Source:	ProQuest LLC, Ph.D. Dissertation, Capella University	Pub Type(s):	Dissertations/Theses - Doctoral Dissertations

Abstract:
Research has found that a solid foundation of early literacy skills is a necessity for later reading and academic success. One such skill that contributes to a strong foundation is phonemic awareness. This study has explained the importance of a phonemic awareness curriculum for kindergarten and first grade special education and at-risk reading students. Students involved in the study were assessed using the DIBELS (Good & Kaminski, 2002)

as a pretest and posttest measure. Students were then involved in an eight week intensive phonemic awareness intervention. This mixed methodology explanatory design study used ANCOVA data for the statistical measure with an open ended questionnaire to parents and teachers regarding student progress as a result of the training program. It is the researcher's belief that the phonemic awareness curriculum improved student early literacy skills. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Monitoring children with reading disabilities' response to phonics intervention: Are there differences between intervention aligned and general skill progress monitoring assessments?
Olinghouse, NG (Olinghouse, Natalie G.); Lambert, W (Lambert, Warren); Compton, DL (Compton, Donald L.)
EXCEPTIONAL CHILDREN Volume: 73   Issue: 1   Pages: 90-106   Published: FAL 2006
This study investigated whether 2 different progress monitoring assessments differentially predicted growth in reading skills associated with systematic phonics instruction. Oral reading fluency (ORF) was compared with an intervention aligned word list (IAWL) as predictors of growth in untimed and timed decoding and word identification and text reading accuracy, fluency, and comprehension. Results from 40 children with reading disabilities, Grades 2-5, indicated that the IAWT accounted for unique variance in change on measures of decoding and word identification, whereas the ORF measure accounted for unique variance. on passage reading fluency gains. Evaluation of the IAWL psychometric properties revealed adequate reliability and construct validity; however, additional analysis indicated that the hierarchical coding scheme used to determine each words rank difficulty ordering was not as effective.

The contribution of phonological awareness and visual attention in early reading and spelling
Plaza, M (Plaza, Monique); Cohen, H (Cohen, Henri)
DYSLEXIA Volume: 13   Issue: 1   Pages: 67-76   DOI: 10.1002/dys.330   Published: FEB 2007
We examined the development of phonological processing, naming speed, and visual attention in kindergarten and addressed the question of their contribution to reading and spelling in grade 1. Seventy five French-speaking children were administered seven tasks at the two phases of the study, and reading and spelling were assessed in grade 1. The major findings revealed that syllable awareness and visual attention were the most important predictors of early reading and spelling, and confirm the influence of naming speed and phoneme awareness on specific skills. These observations strongly suggest that written language acquisition relies on linguistic, perceptual and cognitive cross-modal skills and highlight the need for diversifying written language measures and analyzing their specific predictors.

The assessment and structure of phonological and visual-spatial working memory in 4-year-old children
Roebers, CM (Roebers, CM); Zoelch, C (Zoelch, C)
ZEITSCHRIFT FUR ENTWICKLUNGSPSYCHOLOGIE UND PADAGOGISCHE PSYCHOLOGIE Volume: 37   Issue: 3   Pages: 113-121   DOI: 10.1026/0049-8637.37.3.113   Published: 2005
Given the fact that working memory capacity plays an important role in many areas of cognitive development and can predict school achievement and school skills (e.g., reading, mathematics, and vocabulary acquisition), we adapted and evaluated commonly used tasks

for the assessment of phonological and visual-spatial working memory capacities to the specific requirement of 4-year-olds. In order to assess working memory and to isolate potential risk factors for later cognitive development, the present study introduces and examines working memory tasks for 4-year-old children tapping both the phonological loop and the visual-spatial sketch-pad. The results show that the tasks appear suitable for young children., Furthermore, intercorrelations and confirmatory factor analyses revealed the clear dissociation of the phonological and visual-spatial subsystem of working memory in 4-year-olds as theoretically proposed by Baddeley and Hitch (2000).

The development of first graders' reading skill as a function of pre-school motivational orientation and phonemic awareness
Salonen, P (Salonen, P); Lepola, J (Lepola, J); Niemi, P (Niemi, P)
EUROPEAN JOURNAL OF PSYCHOLOGY OF EDUCATION Volume: 13   Issue: 2
  Pages: 155-174   Published: JUN 1998
This study examined the development of reading skill during the first school year. The predictors were pre-school motivational orientations, coping tendencies, knowledge of the alphabet and phonemic awareness. From 151 pre-school children (6 years of age) rated by pre-school teachers on motivational orientations, 32 non-readers were allocated according to their dominating motivational disposition to one of the following extreme groups, task orientation, social dependence, ego-defensive, and multiple non-task-oriented. Each group included 8 children. The subjects' phonemic awareness and knowledge of the alphabet were assessed. Coping strategies were observed in pre-school during a play-like construction task comprising three induced pressure episodes. At the end of the first grade the children were assessed on word reading skill and again on motivational orientation. Both group comparisons and idiographic analyses were made. Results indicated that pre-school phonemic awareness was associated with first grade word reading skill. Rated task orientation in pre-school enhanced significantly the prediction of fluent word reading Task-oriented children showed significantly better word reading skill than ego-defensive or multiple non-task-oriented children. Ego-defensive and multiple non-task-oriented subjects showed significantly less task oriented, and move ego-defensive, coping behaviour under pressure than task-oriented subjects. This finding suggests greater vulnerability of ego-defensive and multiple non-task-oriented children which may contribute to diverging reading careers. Idiographic analyses indicated parallel developmental changes in reading skill, motivational orientations and coping patterns confirming the role of motivation in the formation of an individual's reading career.

Predicting curriculum and test performance at age 7 years from pupil background, baseline skills and phonological awareness at age 5
Savage, R (Savage, R); Carless, S (Carless, S)
BRITISH JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 74   Pages: 155-171
  DOI: 10.1348/000709904773839815   Part: Part 2   Published: JUN 2004
Background. Phonological awareness tests are known to be amongst the best predictors of literacy; however their predictive validity alongside current school screening practice (baseline assessment, pupil background data) and to National Curricular outcome measures is unknown.
Aim. We explored the validity of phonological awareness and orthographic measures, the Infant Index baseline assessment (Desforges & Lindsay, 1995), gender, free school dinners, and SEN status taken at age 5 in the prediction of English, Maths, and Science performance in Key Stage I of the National Curriculum in England.
Sample. 435 children from nine schools in one Local Educational Authority (LEA) were screened at entry aged 4 or 5, and at 5:8, and age 7.
Method. We trained schools Learning Support Assistants (LSAs) to administer orthographic and phonological awareness measures. Teachers collected data on all baseline and Key Stage I performance measures.

Results. A series of 13 logistic regression analyses revealed that phonological awareness and orthographic knowledge best predicted 12 of 13 measures of performance at Key Stage I. Additional variance was nearly always explained by SEN status. In I I analyses the Infant Index baseline score predicted performance at age 7 and was the best predictor of maths test performance. Gender was an occasional additional predictor.

Conclusion. School LSAs can be readily trained to administer phonological awareness measures to cohorts of 5-year-old children. Such measures used in conjunction with baseline measures significantly enhance prediction of Key Stage I performance. Deploying LSAs in this fashion significantly enhances a school's capacity to identify young children for whom additional support may be necessary.

Savage, R., Carless, S., Ferraro, V.
Predicting curriculum and test performance at age 11 years from pupil background, baseline skills and phonological awareness at age 5 years
(2007) Journal of Child Psychology and Psychiatry and Allied Disciplines, 48 (7), pp. 732-739.
http://www.scopus.com/inward/record.url?eid=2-s2.0-34250810323&partnerID=40&md5=f2def5bd3d8f5ba9bbd9e45e72b1444f
Faculty of Education, McGill University, 3700 McTavish Street, Montreal, ON H3A 1Y2, Canada
Background: Phonological awareness tests are amongst the best predictors of literacy and predict outcomes of Key Stage 1 assessment of the National Curriculum in England at age 7. However, it is unknown whether their ability to predict National Curricular outcomes extends to Key Stage 2 assessments given at age 11, or also whether the predictive power of such tests is independent of letter-knowledge. We explored the unique predictive validity of phonological awareness and early literacy measures, and other pupil background measures taken at age 5 in the prediction of English, Maths, and Science performance at age 11. Method: Three hundred and eighty-two children from 21 primary schools in one Local Educational Authority were assessed at age 5 and followed to age 11 (Key Stage 2 assessment). Teaching assistants (TAs) administered phonological awareness tasks and early literacy measures. Baseline and Key Stage 2 performance measures were collected by teachers. Results: Phonological awareness was a significant unique predictor of all nine outcome measures after baseline assessment and pupil background measures were first controlled in regression analyses, and continued to be a significant predictor of reading, maths, and science performance, and teacher assessments after early literacy skill and letter-knowledge was controlled. Gender predicted performance in writing, the English test, and English teacher assessment, with girls outperforming boys. Conclusions: Phonological awareness is a unique predictor of general curricular attainment independent of pupil background, early reading ability and letter-knowledge. Practically, screening of phonological awareness and basic reading skills by school staff in year 1 significantly enhances the capacity of schools to predict curricular outcomes in year 6.

Long-term effects of computer training of phonological awareness in kindergarten
Segers, E (Segers, E); Verhoeven, L (Verhoeven, L)
JOURNAL OF COMPUTER ASSISTED LEARNING Volume: 21 Issue: 1 Pages: 17-27 DOI: 10.1111/j.1365-2729.2005.00107.x Published: FEB 2005
The present study examined the long-term effects of a computer intervention for the development of phonological awareness in Dutch kindergartners. Native Dutch and immigrant children worked with the software 15 min/week during one school year. Following a pretest - interim test - post-test - retention test design, the effects on rhyming, phonemic segmentation, auditory blending, and grapheme knowledge were assessed. The intervention showed significant immediate effects on rhyming and grapheme knowledge. The time spent on the computer games also correlated with the learning gains for the experimental group. In

the first grade, retention effects were demonstrated after 4 months of formal reading education.

Effects Of A Phonological Awareness Training On The Acquisition Of Literacy
SCHNEIDER, W (SCHNEIDER, W); VISE, M (VISE, M); REIMERS, P (REIMERS, P); BLAESSER, B (BLAESSER, B)

A training study based on the design of Lundberg, Frost & Petersen (1988) was conducted to improve German Kindergarteners' phonological awareness. A total of 371 Kindergarteners participated in the study. The training group (N = 205) participated in a metalinguistic program that lasted for about six months (15 minutes per day). The control group did not receive any specific training but participated in the regular kindergarten program. Indicators of phonological awareness and other metalinguistic and cognitive variables were assessed both before and after the training. Further, a metalinguistic transfer test and a spelling test were given at the beginning and the end of first grade, respectively. The results confirmed those of the Danish study in that short- and long-term training effects were obtained. They also illustrate, however, that the quality of training had a significant effect on long-term maintenance.

Short- and long-term effects of training phonological awareness in kindergarten children: Findings from a secondary analysis

Schneider, W (Schneider, W); Roth, E (Roth, E); Kuspert, P (Kuspert, P); Ennemoser, M (Ennemoser, M)

This paper represents a secondary analysis of data from Schneider. Reimers, Roth, Vise and Marx (1997). The major goal was to assess the impact of training phonological awareness in kindergarten on subsequent reading and spelling in early elementary school. In particular, the secondary analysis addressed the question whether children with initially low levels of phonological awareness (i.e., children-at-risk) would benefit from such a training program. To explore this issue, three different group comparisons were made. (1) When trained "children-at-risk" were compared with those children initially showing normal or above-average phonological awareness, similar performance gains after training were found. (2) When "children-at-risk" were compared with the total control group, it was shown that the initial advantage of the control children disappeared after training; somewhat surprisingly, comparably better per formance of "children-at-risk" was observed for both the level of phonological awareness and reading and spelling in school. (3) As expected, trained "children-at-risk" outperformed their untrained counterparts on all post-training measures. Interestingly, however, not all of the untrained "children-at-risk" turned into problem children at school, indicating that additional factors not included in this study affect the acquisition of literacy.

Predicting Progress In Beginning Reading - Dynamic Assessment Of Phonemic Awareness
SPECTOR, JE (SPECTOR, JE)

This study investigates the ability of a dynamic measure of phonemic awareness to predict progress in beginning reading. Thirty-eight kindergarteners who were nonreaders were assessed in the fall on receptive vocabulary, letter and word recognition, invented spelling, phoneme segmentation, phoneme deletion, and dynamic phoneme segmentation. They were retested near the end of the school year on reading, spelling, and phonemic awareness. The results of the multiple-regression analyses supported the hypothesis that dynamic assessment enhances the predictive utility of a phonemic awareness measure. Performance on dynamic phoneme segmentation was the best predictor of end-of-year

reading scores and of growth in phonemic awareness. The study demonstrates the applicability of principles of dynamic assessment to the measurement of phonemic awareness and provides further evidence regarding the relationship between phonemic awareness and reading acquisition.

Torgesen, J.K., Davis, C.
Individual difference variables that predict response to training in phonological awareness (1996) Journal of Experimental Child Psychology, 63 (1), pp. 1-21. Cited 78 times.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0030267764&partnerID=40&md5=9322b9156502974f92b4f0c0014149ec
Psychology Department, Florida State University, Tallahassee, FL 32309-1051, United States
The cognitive abilities that predicted growth in response to a 12-week training program in phonological awareness were investigated with a sample of 100 kindergarten children. The children were selected from two elementary schools with historically low achievement in reading. Sixty children received training in both analytic and synthetic awareness skills, and 40 children constituted a no-treatment control group. Pretest measures included assessment of phonological awareness, phonological memory and naming rate, letter knowledge, reading and spelling, and general verbal ability. Growth in phonological awareness was assessed during the middle and at the end of the training period. Hierarchical linear modeling was used to estimate individual growth curves in phonological awareness for children in both the treatment and control groups. Initial comparisons between children in the two groups indicated substantial overall training effects in phonological awareness for children in the treatment group. For children in the training group, the model that best predicted growth in analytic awareness included invented spelling and general verbal ability, while growth in synthetic awareness was predicted best by a combination of invented spelling and rapid automatic naming of digits.

Modeling the early paths of phonological awareness and factors supporting its development in children with and without familial risk of dyslexia
Torppa, M (Torppa, Minna); Poikkeus, AM (Poikkeus, Anna-Maija); Laakso, ML (Laakso, Marja-Leena); Tolvanen, A (Tolvanen, Asko); Leskinen, E (Leskinen, Esko); Leppanen, PHT (Leppanen, Paavo H. T.); Puolakanaho, A (Puolakanaho, Anne); Lyytinen, H (Lyytinen, Heikki)
SCIENTIFIC STUDIES OF READING Volume: 11   Issue: 2   Pages: 73-103   Published: 2007
The development of phonological awareness (PA) before school age was modeled in association with the development of vocabulary and letter knowledge, home literacy environment (HLE), children's reading interest, and beginning reading skill in children with and without familial risk of dyslexia. A total of 186 children were followed from birth to the age of 6.5 years. Of these children, about half had a familial background of reading difficulties (the at-risk group), and the other half came from families without such background (the control group). The data from several measures and assessment time points were analyzed within an SEM framework, and a latent analysis of growth curves was employed. Vocabulary and letter knowledge were found to predict PA development, and vice versa, PA predicted them. The effect of HLE on PA was mediated by vocabulary skills, and of the HLE variables, the only variable predicting vocabulary development was shared reading. In spite of the difference in level, favoring the controls, the pattern of effects of vocabulary and letter knowledge on PA development was highly similar in children with and without familial risk: for dyslexia. However, in the at-risk group, the HLE variables and children's reading interest had stronger associations with each other and with skill development than in the control group, and vocabulary predicted parental reports on children's reading interest in the at-risk group only.

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Nijmegen, Netherlands
The purpose of the present study was to explore the possibilities for the assessment of
growth in phonological awareness of children in kindergarten and first grade. Phonological
awareness was measured using four sets of items involving rhyming, phoneme identification,
phoneme blending, and phoneme segmentation. The results of an exploratory factor
analysis and analyses conducted within the framework of item response theory showed one
latent ability to underlie the different sets of items, which nevertheless differed in difficulty.
Analyses in terms of the children's ability further showed the phonological awareness
measures to be sensitive to growth. The amount of information supplied by the different sets
of items depended on the children's level of ability. The conclusion that it is possible to
accurately monitor the development of children's phonological awareness in the early
elementary grades appears to be justified, and this possibility opens up new perspectives for
the early screening for reading problems and dyslexia.

Morphology

[Contributions of Morphological Awareness Skills to Word-Level Reading and Spelling in First-Grade Children with and without Speech Sound Disorder](#)
(EJ944797)

Abstract:
Purpose: In this study, the authors compared the morphological awareness abilities of children with speech sound disorder (SSD) and children with typical speech skills and examined how morphological awareness ability predicted word-level reading and spelling performance above other known contributors to literacy development. Method: Eighty-eight first-grade students--44 students with SSD and no known history of language deficiencies, and 44 students with typical speech and language skills--completed an assessment battery designed to measure speech sound production, morphological awareness, phonemic awareness, letter-name knowledge, receptive vocabulary, word-level reading, and spelling abilities. Results: The children with SSD scored significantly lower than did their counterparts on the morphological awareness measures as well as on phonemic awareness, word-level reading, and spelling tasks. Regression analyses suggested that morphological awareness predicted significant unique variance on the spelling measure for both groups and on the word-level reading measure for the children with typical skills. Conclusion: These results suggest that children with SSD may present with a general linguistic awareness insufficiency, which puts them at risk for difficulties with literacy and literacy-related tasks

The Role of Morphological Awareness in Reading Achievement among Young Chinese-Speaking English Language Learners: A Longitudinal Study
(EJ976651)

Abstract:
The present study examined the development of morphological awareness and its contribution to vocabulary and reading comprehension among young Chinese-speaking English language learners (ELLs). We focused on two aspects of morphological awareness: derivational awareness and compound awareness. Participants included 46 kindergarteners (younger cohort) and 34 first graders (older cohort) of Chinese descent in Canada at the beginning of the study. Children were administered a battery of English measures including derivational awareness, compound awareness, phonological awareness, receptive vocabulary, and reading comprehension at two time points spaced 1 year apart. Results demonstrated a steady growth in Chinese-speaking ELL children's derivational and compound awareness from kindergarten to Grade 2. Importantly, for the

first graders, morphological awareness accounted for unique variance in vocabulary concurrently, and unique variance in both vocabulary and reading comprehension a year later. Generally speaking, the variance explained by morphological awareness increased with grade level, and derivational awareness accounted for more variance in vocabulary and reading comprehension than did compound awareness. These results underscore the emerging importance of morphological awareness, especially derivational awareness, in young Chinese-speaking ELL children's English reading development.

The Componential Model of Reading: Predicting First Grade Reading Performance of Culturally Diverse Students from Ecological, Psychological, and Cognitive Factors Assessed at Kindergarten Entry (EJ975633)

Abstract:
This study, framed by the component model of reading (CMR), examined the relative importance of kindergarten-entry predictors of first grade reading performance. Specifically, elements within the ecological domain included dialect, maternal education, amount of preschool, and home literacy; elements within the psychological domain included teacher-reported academic competence, social skills, and behavior; and elements within the cognitive domain included initial vocabulary, phonological, and morpho-syntactic skills, and alphabetic and word recognition skills. Data were obtained for 224 culturally diverse kindergarteners (58% Black, 34% White, and 8% Hispanic or other; 58% received free or reduced-price lunch) from a larger study conducted in seven predominantly high poverty schools (n = 20 classrooms) in a midsized city school district in northern Florida. Results from a hierarchical multiple regression (with variables in the ecological domain entered first, followed by the psychological and cognitive domains) revealed a model that explained roughly 56% of the variance in first grade reading achievement, using fall-of-kindergarten predictors. Letter-word reading and morpho-syntactic skill were the strongest significant predictors. The findings largely support the CMR model as a means to understand individual differences in reading acquisition and, in turn, to support data-based instructional decisions for a wider range of children.

Memory

On the association between serial naming speed for letters and digits and word-reading skill: towards a developmental account
Bowey, JA (Bowey, JA); McGuigan, M (McGuigan, M); Ruschena, A (Ruschena, A)
JOURNAL OF RESEARCH IN READING Volume: 28   Issue: 4   Pages: 400-422   DOI: 10.1111/j.1467-9817.2005.00278.x   Published: NOV 2005
The current study examined several alternative explanations of the association between serial naming speed within fourth-grade children by determining the extent to which the association between word reading and naming speed for letters and numbers is mediated by global processing speed, alphanumeric symbol processing efficiency and phonological processing ability. Children were given multiple measures of key constructs, i.e. word-level reading, serial naming of both alphanumeric and non-alphanumeric items, phonological processing ability, articulation rate and global processing speed. The robust association between alphanumeric naming speed and reading within fourth-grade children was largely mediated by phonological processing ability. Markedly different patterns of results were observed for naming speed for letters and digits and naming speed for colours and pictures in children of this age. Relative to the latter, alphanumeric naming speed better assesses an underlying phonological processing ability that is common to word-reading ability. We argue that item identification processes contribute little to individual differences in alphanumeric naming speed within relatively proficient readers and that the extent to which alphanumeric naming speed primarily reflects phonological processing is likely to vary with the level of overlearning of letters and numbers and their names.

Children's reading comprehension ability: Concurrent prediction by working memory, verbal ability, and component skills
Cain, K (Cain, K); Oakhill, J (Oakhill, J); Bryant, P (Bryant, P)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 96   Issue: 1   Pages: 31-42   DOI: 10.1037/0022-0663.96.1.31   Published: MAR 2004
The authors report data from a longitudinal study that addresses the relations between working memory capacity and reading comprehension skills in children aged 8, 9, and 11 years. At each time point, the authors assessed children's reading ability, vocabulary and verbal skills, performance on 2 working memory assessments (sentence-span and digit working memory), and component skills of comprehension. At each time point, working memory and component skills of comprehension (inference making, comprehension monitoring, story structure knowledge) predicted unique variance in reading comprehension after word reading ability and vocabulary and verbal ability controls. Further analyses revealed that the relations between reading comprehension and both inference making and comprehension monitoring were not wholly mediated by working memory. Rather, these component skills explained their own unique variance in reading comprehension.

Distinctive patterns of relationship of phonological awareness and working memory with reading development
Cormier, P (Cormier, P); Dea, S (Dea, S)
READING AND WRITING Volume: 9   Issue: 3   Pages: 193-206   DOI: 10.1023/A:1007932721290   Published: JUN 1997
The purpose of this study was to assess the contributions of specific components of verbal and nonverbal working memory and of phonological awareness to the prediction of reading achievement. One hundred and three children from grades 1, 2, and 3 were administered a measure of phonological awareness, four measures of working memory, four measures of academic achievement, and a measure of verbal intelligence. Separate multiple regression analyses controlling for the effects of age, sex and verbal intelligence showed that tests of verbal memory and of direct recall significantly predicted reading and spelling achievement

whereas tests of backward recall significantly predicted only pseudoword identification. Phonological awareness was also found to relate significantly to reading and spelling achievement even when working memory was partialled out. Thus, phonological awareness and measures of working memory predicted specific and significant amounts of variance in reading and spelling achievement. Further, none of these measures were specifically related to arithmetic achievement. The specific roles of phonological awareness and working memory in reading development are examined in the discussion.

The role of phonological memory, word recognition, and comprehension skills in reading development: from preschool to grade 2
Dufva, M (Dufva, M); Niemi, P (Niemi, P); Voeten, MJM (Voeten, MJM)
We examined the relationships among phonological awareness, phonological memory, and development of reading skills in a longitudinal study, by following 222 Finnish preschoolers through the grade 2. The main focus was on the role of phonological memory in word recognition and comprehension. The skills assessed were verbal abilities, phonological memory, phonological awareness, word recognition, listening and reading comprehension, altogether comprising the most extensive set of variables so far used in the study of phonological memory and reading. We proposed a structural equation model for the developmental relationships among the variables. This model was largely confirmed by the data. The most significant predictor of word recognition was phonological awareness. Phonological memory had only a weak effect on phonological awareness at preschool age, and via this connection, a weak indirect effect on grade 1 word recognition. Contrary to expectations, phonological memory also had a significant, albeit weak effect on grade 2 word recognition. Phonological memory did not directly affect reading comprehension. However, it was strongly related to listening comprehension at preschool, and via the strong effects of both listening comprehension and word recognition on reading comprehension, there were significant indirect effects of phonological memory on reading comprehension. The results also underline the stability of development of phonological memory, word recognition, and comprehension from preschool to the end of grade 2.

Selected short-term memory tests as predictors of reading readiness
John, KR (John, KR)
Three standardized measures of short-term memory (STM) were compared to determine their relative efficacy in predicting reading achievement for primary grade students (n = 36) over a two-year time period. Regression analyses revealed that not all of the STM tests were significant (p < .05) predictors of reading. Moreover, predictive power varied as a function of the reading skill assessed (e.g., decoding or comprehension) and the grade placement of the student. A letter sequences test was found to be the task most frequently associated with reading performance. A memory-for-sentences task also showed a significant relationship to certain aspects of reading. However, a word sequences test was found not to be predictive of reading achievement. Implications for test selection and remedial planning are discussed.

Developmental associations between verbal and visual short-term memory and the acquisition of decoding skill
Meyler A.; Breznitz Z.
This study longitudinally investigated the relationships between verbal and visual short-term memory (STM) and the acquisition of decoding from the pre-reading through the early acquisition stages in 63 Hebrew-speaking children Test waves occurred in kindergarten, first grade and second grade. IQ, visual and verbal STM and decoding ability were assessed.

The data indicated that while both verbal and visual STM in kindergarten were significantly correlated to later decoding skill, pre-reading visual STM was a stronger predictor. The results further showed that pre-reading performance on the WISC-R Block Design test predicted later decoding ability, while performance on the WISC-R Vocabulary test did not. Lastly decoding skill in grade 1 was found to predict only visual in grade 2. These results indicate that visual parameters may make a crucial contribution to the acquisition of decoding skills. The size of pre-reading visual STM capacity appears to play a role in this process. The relationship between visual STM and decoding may be bidirectional, as learning to decode appears to develop visual STM. It is suggested that either language-related or task-related factors may account for these counter-to-mainstream results.

Early contribution of phonological awareness and later influence of phonological memory throughout reading acquisition

Nithart, Christelle[1]; Demont, Elisabeth[1]; Metz-Lutz, Marie-Noëlle[1]; Majerus, Steve[2]; Poncelet, Martine[2]; Leybaert, Jacqueline[3]

The acquisition of reading skills is known to rely on early phonological abilities, but only a few studies have investigated the independent contribution of the different steps involved in phonological processing. This 1-year longitudinal study, spanning the initial year of reading instruction, aimed at specifying the development of phonological discrimination, awareness and various aspects of phonological memory and at assessing their respective contributions to early reading acquisition. Our results show an increase in performance at each phonological processing step, but also suggest a qualitative evolution in their relative importance. Hierarchical regression analyses indicate that reading skills are mainly predicted by phonological awareness measured at the kindergarten stage and, subsequently, by phonological memory abilities measured at the end of first grade. More precisely short-term memory for serial-order information seems to contribute to the development of decoding abilities, while phonological knowledge stored in long-term memory seems to influence word recognition.

The assessment and structure of phonological and visual-spatial working memory in 4-year-old children

Roebers, CM (Roebers, CM); Zoelch, C (Zoelch, C)

Given the fact that working memory capacity plays an important role in many areas of cognitive development and can predict school achievement and school skills (e.g., reading, mathematics, and vocabulary acquisition), we adapted and evaluated commonly used tasks for the assessment of phonological and visual-spatial working memory capacities to the specific requirement of 4-year-olds. In order to assess working memory and to isolate potential risk factors for later cognitive development, the present study introduces and examines working memory tasks for 4-year-old children tapping both the phonological loop and the visual-spatial sketch-pad. The results show that the tasks appear suitable for young children., Furthermore, intercorrelations and confirmatory factor analyses revealed the clear dissociation of the phonological and visual-spatial subsystem of working memory in 4-year-olds as theoretically proposed by Baddeley and Hitch (2000).

Reading Comprehension

Subgrouping poor readers on the basis of individual differences in reading-related abilities
Catts, HW (Catts, HW); Hogan, TP (Hogan, TP); Fey, ME (Fey, ME)
JOURNAL OF LEARNING DISABILITIES Volume: 36 Issue: 2 Pages: 151-164 DOI: 10.1177/002221940303600208 Published: MAR-APR 2003
The present study investigated the use of the Reading Component Model to subgroup poor readers. A large sample of poor readers was identified in second grade and subgrouped on the basis of relative strengths and weaknesses in word recognition and listening comprehension. Although homogeneous subgroups were not identified, poor readers could be classified into four subgroups that differed significantly in reading-related abilities. Further analyses showed that poor readers' strengths and weaknesses in listening comprehension, and to a lesser extent in word recognition, were foreshadowed by their abilities on related kindergarten measures. Follow-up testing in the fourth grade indicated that poor readers' individual differences in word recognition and listening comprehension were consistent and that subgroups were moderately stable. The implications of these results for the assessment and remediation of reading disabilities are discussed.

The role of phonological memory, word recognition, and comprehension skills in reading development: from preschool to grade 2
Dufva, M (Dufva, M); Niemi, P (Niemi, P); Voeten, MJM (Voeten, MJM)
READING AND WRITING Volume: 14 Issue: 1-2 Pages: 91-117 DOI: 10.1023/A:1008186801932 Published: MAR 2001
We examined the relationships among phonological awareness, phonological memory, and development of reading skills in a longitudinal study, by following 222 Finnish preschoolers through the grade 2. The main focus was on the role of phonological memory in word recognition and comprehension. The skills assessed were verbal abilities, phonological memory, phonological awareness, word recognition, listening and reading comprehension, altogether comprising the most extensive set of variables so far used in the study of phonological memory and reading. We proposed a structural equation model for the developmental relationships among the variables. This model was largely confirmed by the data. The most significant predictor of word recognition was phonological awareness. Phonological memory had only a weak effect on phonological awareness at preschool age, and via this connection, a weak indirect effect on grade 1 word recognition. Contrary to expectations, phonological memory also had a significant, albeit weak effect on grade 2 word recognition. Phonological memory did not directly affect reading comprehension. However, it was strongly related to listening comprehension at preschool, and via the strong effects of both listening comprehension and word recognition on reading comprehension, there were significant indirect effects of phonological memory on reading comprehension. The results also underline the stability of development of phonological memory, word recognition, and comprehension from preschool to the end of grade 2.

Use of brief experimental analysis for selecting reading interventions for English language learners
Malloy, KJ (Malloy, Kimberley J.); Gilbertson, D (Gilbertson, Donna)[1]; Maxfield, J (Maxfield, Janie)
SCHOOL PSYCHOLOGY REVIEW Volume: 36 Issue: 2 Pages: 291-310 Published: 2007
Abstract: Identifying an effective instructional intervention for English language learners experiencing reading problems is a difficult task given the vast individual differences in language proficiency, motivation, and school experience for these students. To address this issue, this study investigated the utility of brief experimental analysis as a means to identify the most effective instructional components to increase reading performance for five English

language learners. Using a multielement design, five reading treatments were administered one at a time with increasing language support. There were individual differences in response and all students responded to at least one treatment. Further, an extended analysis of alternating baseline conditions with the hypothesized effective treatment showed that selected interventions increased reading rates for four of the five participants over time. A combination of the three most effective interventions, based on results from the brief experimental analysis, increased reading performance for the fifth student.

Assessing narrative comprehension in young children
Paris, AH (Paris, AH); Paris, SG (Paris, SG)

This article explains the creation and validation of the Narrative Comprehension of Picture Books task (NC task), an assessment of young children's comprehension of wordless picture books. Study I explored developmental changes among 158 K-2 children in narrative comprehension and the correlations among children's performance on the NC task and other measures of early reading. There was significant improvement with increasing age on NC task measures. Significant concurrent validity was found between the NC task and oral reading comprehension for readers and between the NC task and several prereading skills for prereaders. Study 2 tested the generalizability of the NC task by giving a sub-sample of students (n = 91) two additional picture books using the NC task procedures. Intertask correlations showed that children were consistent on each of the NC task dependent variables across the three books. The same developmental trends by grade and reading ability were evident on all three versions of the task. Study 3 confirmed the generalizability of the NC task across children, books, and testers, and it revealed sensitivity to longitudinal growth in children's comprehension skills. There was little evidence of practice effects influencing NC scores. Study 3 also revealed significant concurrent and predictive validity between NC measures and other assessments of early reading skills such as the Gates McGinitie Reading Test and the Iowa Test of Basic Skills. The NC task is a valid quantitative measure of young children's comprehension that is sensitive to developmental changes and adaptable to various books. We discuss how narrative comprehension is fundamental to beginning reading and how the NC task may be used for classroom instruction and assessment.

Paris, A.H.a b , Paris, S.G.a
Teaching narrative comprehension strategies to first graders

University of Michigan, United States; Berger Institute for Work, Family and Children, Claremont McKenna College, Claremont, CA 91711, United States
This study provided 5 weeks of direct strategy instruction about narrative elements and relations in 4 first-grade classrooms (n = 83), all with materials that made minimal decoding demands on children's reading. Two comparison classrooms (n = 40) received comparable instruction on language development and poetry. A battery of assessments given at pretest and posttest showed that the intervention benefited children's comprehension of narratives in the picture-viewing modality as well as narrative meaning-making in listening comprehension and oral production modalities. Understanding and recall of main narrative elements improved, as did inference-making skills and understanding the psychological aspects of stories. Implications for enhancing beginning readers' emerging narrative knowledge in primary grade classrooms are discussed.

Children's reading comprehension and oral reading fluency in easy text
Spear-Swerling, L (Spear-Swerling, L)

This study explored third-graders' oral reading fluency (ORF) in easy text in relation to their third- and fourth-grade reading comprehension. It also examined the children's performance on two different measures of text exposure, a self-report questionnaire and a title-recognition test. Although third-graders' ORF related significantly to their reading comprehension, oral language comprehension accounted for most of the variance in reading comprehension, whereas single word reading speed accounted for most of the variance in ORE Third-grade reading comprehension and ORF each predicted unique variance in children's scores on a fourth-grade state-mandated reading comprehension assessment. Scores on the self-report questionnaire correlated significantly with third-grade ORF and fourth-grade reading; the self-report accounted for reliable variance in ORF even with all of the other reading ability variables entered first. Results are consistent with the viewpoint that text exposure affects reading fluency. They also demonstrate that ORF is a valuable predictor of middle-elementary children's reading comprehension, even when the ORF measure employs very easy text in which children achieve near-perfect word accuracy.

Reading at the frustration, instructional, and independent levels: The effects on students' reading comprehension and time on task

Treptow, MA (Treptow, Megan A.)[1]; Burns, MK (Burns, Matthew K.)[2]; McComas, JJ (McComas, Jennifer J.)[3]

The current study replicated Gickling and Armstrong (1978) by using curriculum-based assessment for instructional design to match reading materials to skill levels of three third-graders who were struggling readers with low levels of on-task behavior. Difficulty levels of the reading passages were grouped according to ratios of known and unknown words into three categories: frustration (80-90% known), instructional (93-97% known), and independent levels (100% known). A single-subject, multielement design was used to examine the effects of these reading activities on individual students' time on task and reading comprehension. Although within-subject variability in responding was observed, results suggested that students demonstrated improved time on task while completing tasks at the instructional level, compared to tasks at the frustration and independent levels. Comprehension was highest at the independent level and lowest at the frustration level. These findings were consistent with but not as robust as those reported by Gickling and Armstrong.

Fluency

A Structural Equation Model Using Fluency-Based Early Literacy Measures to Predict Emerging Reading Ability in Kindergarten
Burke, Mack D.; Hagan-Burke, Shanna; Zou, Yuanyuan; Kwok, Oiman
Remedial and Special Education vol. 31, no. 5 (2010), p. 385-399
The reauthorization of the Individuals with Disabilities Education Act has initiated changes that are affecting early literacy assessment, and it has prompted the growing use of measures that incorporate phonological and alphabetic fluency. However, the question of how phonological and alphabetic fluency can inhibit (or promote) reading acquisition in kindergarten has received sparse attention. This study investigated phonological and alphabetic fluency as a predictor of emerging reading ability in kindergarten. Results indicated that a three-construct structural equation model could be developed. Moreover, an alphabetic construct, as formed from sublexical fluency measures administered at the middle of kindergarten, fully mediated the relationship between phonological fluency and end-of-year emerging reading ability. Implications are discussed in the context of reading acquisition.

Estimates of the standard error of measurement for curriculum-based measures of oral reading fluency
Christ, TJ (Christ, Theodore J.)1; Silberglitt, B (Silberglitt, Benjamin)
SCHOOL PSYCHOLOGY REVIEW Volume: 36 Issue: 1 Pages: 130-146 Published: 2007
Curriculum-based measurement of oral reading fluency (CBM-R) procedures have been developed to screen and evaluate student performance in reference to local norms and/or benchmarks. Recent changes in federal-law have set the stage to use CBM-R data within a response to intervention model to guide high-stakes educational decisions (e.g., eligibility and diagnosis). The purpose of this study was to derive estimates for the standard error of measurement (SEM) of CBM-R. A sample of 8,200 students was assessed across 8 years for a total of 63,207 CBM-R probes. The median level of SEM across grades was 10 words read correctly per minute (WRCM; range = 5-15). Estimates are provided within a variety of contexts (i.e., reliability, grade level, heterogeneity of sample) with the most likely estimates in the range of 5-9 WRCM. Potential applications are discussed along with implications for future research.

Monitoring early reading development in first grade: Word identification fluency versus nonsense word fluency
Fuchs, LS (Fuchs, LS); Fuchs, D (Fuchs, D); Compton, DL (Compton, DL)
EXCEPTIONAL CHILDREN Volume: 71 Issue: 1 Pages: 7-21 Published: FAL 2004
This study contrasts the validity of 2 early reading curriculum-based measurement (CBM) measures: word identification fluency and nonsense word fluency. At-risk children (n = 151) were assessed (a) on criterion reading measures in the fall and spring of first grade and (b) on the 2 CBM measures each week for 7 weeks and twice weekly for an additional 13 weeks. Concurrent and predictive validity for CBM performance level and predictive validity for CBM slopes demonstrated the superiority of word identification fluency over nonsense word fluency. Findings are discussed in terms of the measures' utility for identifying children in need of intensive instruction and for monitoring children's progress through first grade.

Toward a technology for assessing basic early literacy skills
Kaminski, RA (Kaminski, RA); Good, RH (Good, RH)
SCHOOL PSYCHOLOGY REVIEW Volume: 25 Issue: 2 Pages: 215-227 Published: 1996

This study examined the reliability validity, and sensitivity of experimental measures developed to assess three areas of early literacy: phonological awareness, vocabulary development, and fluency in letter naming. The measures were designed for repeated use to identify children with difficulty acquiring basic early literacy skills and to evaluate the effectiveness of interventions for these children. Subjects were 38 kindergarten and 40 first grade children. Results indicated that the measures displayed adequate psychometric properties for kindergarten children who were not yet reading. Reliabilities were moderate to high and evidence was obtained For the criterion-related validity of the measures. Sensitivity of the measures was supported, although further research is needed. As expected, the experimental measures were less useful for first graders who were reading well. Implications for practice are discussed.

Proximal and Distal Predictors of Reading Comprehension: Evidence from Young Korean Readers

Kim, YS (Kim, Young-Suk)[1,2]

The present study investigated proximal and distal predictors of reading comprehension by including latent factors such as alphabet knowledge, phonological awareness, semantic knowledge, word reading, oral reading fluency, and reading comprehension. The sample consisted of 79 five-year-old Korean-monolingual children who were assessed at the end of the school year. The results showed that alphabet knowledge, phonological awareness, and semantic knowledge latent variables were all positively and highly related to word-reading skills, but phonological awareness made a unique contribution above and beyond alphabet knowledge and semantic knowledge. Word reading was highly related to oral reading fluency and directly related to reading comprehension. Oral reading fluency, although a separate construct from word reading accuracy, was not uniquely related to reading comprehension after accounting for the effects of word reading and semantic knowledge. Semantic knowledge was fairly strongly and uniquely related to reading comprehension.

Greater Validity For Oral Reading Fluency - Can Miscues Help

PARKER, R (PARKER, R); HASBROUCK, JE (HASBROUCK, JE); TINDAL, G (TINDAL, G)

Oral reading fluency (ORF), or number of words read correctly per minute, is well researched as a reliable and valid reading index for use in remedial and special education. However, widespread use has been limited, apparently by its lack of face validity as a measure of reading comprehension. The purpose of this study was to examine the criterion-related validity of traditional ORF and two miscue-based assessment types: (a) modified ORF, based on only meaning change miscues (ORF-M), severe meaning change miscues (ORF-S), and uncorrected miscues (ORF-U); and (b) modified oral reading accuracy (ORA), based on the same miscue types, to produce ORA-M, ORA-S, and ORA-U. Four external criteria were used to judge criterion-related validity: (a) teacher judgements of student reading ability, (b) the Analytical Reading Inventory (ARI) (Woods & Moe, 1985), (c) a maze procedure (multiple choice close), and (d) reading group placement (special education/Chapter I pull-out groups vs. lowest regular classroom reading group). Results did not favor any modifications of traditional ORF. A modified ORA (ORA-S) demonstrated predictive power comparable to traditional ORF, but with reduced interscorer accuracy. The study confirmed the strength of traditional ORF, but pointed out the potential for the practical use of selected miscue types as accuracy indices, if reliability problems can be overcome.

The utility and accuracy of oral reading fluency score types in predicting reading comprehension

Petscher, Y (Petscher, Yaacov)[1]; Kim, YS (Kim, Young-Suk)[2,3]

This study used data from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002) oral reading fluency (ORF) probes to examine variation among different ORF score types (i.e., the median of three passages, the mean of all three passages, the mean of passages 2 and 3, and the score from passage 3) in predicting reading comprehension as a function of student reading fluency level and to compare the screening accuracy of these score types in predicting student reading comprehension. The results revealed that the relation between oral reading fluency and reading comprehension varied as a function of students' oral reading fluency and that different score types had varying predictive validity for year-end reading comprehension. The mean of all three passages demonstrated a marginally better balance in screening efficiency from September to December of grade one (especially for low-performing students), whereas in grades two and three, the median score was the best predictor. Furthermore, across all grades, increasing reading rates were observed for the three administered passages within an assessment period. The observed patterns mimicked previous experimental studies (Francis et al., 2008; Jenkins, Graff, & Miglioretti, 2009), suggesting that practice effects are an important consideration in the administration of multiple passages assessing oral reading fluency.

Are fluency measures accurate predictors of reading achievement.?
Schilling, SG (Schilling, Stephen G.); Carlisle, JE (Carlisle, Joanne E.); Scott, SE (Scott, Sarah E.); Zeng, J (Zeng, Ji)
This study focused on the predictive validity of fluency measures that comprise Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Data were gathered from first through third graders attending 44 schools in 9 districts or local educational agencies that made up the first Reading First cohort in Michigan. Students were administered DIBELS subtests in the fall, winter, and spring, and they took the reading subtests of the Iowa Tests of Basic Skills (ITBS) in the spring. Results showed that DIBELS subtests significantly predicted year-end reading achievement on the ITBS, Reading Total subtest. They also showed that DIBELS at-risk benchmarks for oral reading fluency (ORF) were reasonably accurate at identifying second and third graders who were reading below the twenty-fifth percentile at the end of the year (80% and 76% for second and third graders, respectively). However, 32% of second graders and 37% of third graders who were identified as at low risk by the ORF benchmarks turned out not to be reading at grade level on ITBS in April. We discuss 2 possibilities for improving the assessment of Students' progress in reading: (a) supplementing DIBELS with measures of reading comprehension and vocabulary, and (b) using frequent progress-monitoring assessments for students at risk for reading problems to identify students who are not responding to classroom instruction.

Children's reading comprehension and oral reading fluency in easy text
Spear-Swerling, L (Spear-Swerling, L)
This study explored third-graders' oral reading fluency (ORF) in easy text in relation to their third- and fourth-grade reading comprehension. It also examined the children's performance on two different measures of text exposure, a self-report questionnaire and a title-recognition test. Although third-graders' ORF related significantly to their reading comprehension, oral language comprehension accounted for most of the variance in reading comprehension, whereas single word reading speed accounted for most of the variance in ORE Third-grade reading comprehension and ORF each predicted unique variance in children's scores on a fourth-grade state-mandated reading comprehension assessment. Scores on the self-report

questionnaire correlated significantly with third-grade ORF and fourth-grade reading; the self-report accounted for reliable variance in ORF even with all of the other reading ability variables entered first. Results are consistent with the viewpoint that text exposure affects reading fluency. They also demonstrate that ORF is a valuable predictor of middle-elementary children's reading comprehension, even when the ORF measure employs very easy text in which children achieve near-perfect word accuracy.

Book Availability

Books make a difference: A study of access to literacy
Neuman, SB (Neuman, SB)
READING RESEARCH QUARTERLY Volume: 34   Issue: 3   Pages: 286-311   DOI: 10.1598/RRQ.34.3.3   Published: JUL-SEP 1999
This study examines the impact of an intervention targeting economically disadvantaged children in child care centers. The program was designed to flood over 330 child care centers with high-quality children's books, at a ratio of 5 books per child. and provide 10 hours of training to child-care staff. Conceptualized as a formative experiment, this study examined the project's impact, systematically sampling 400 3- and 4-year-old children randomly selected from 50 centers across 10 regions and 100 control children from comparable child care centers not involved in the project. Children's early literacy skills (receptive language, concepts of print, environmental print, letter name knowledge, concepts of a;writing, and narrative competence) were assessed prior to and following the study. In addition, a posttest-only sample and a kindergarten sample were included, focusing on the project's longterm impact. Changes in child care practices were assessed throughout the project, using photographic accounts of the physical environments of classrooms, literacy-related interactions between teachers and children in sample classrooms, and storybook reading activity in both treatment and control classrooms. Process measures indicated enhanced physical access to books, greater verbal interaction around literacy, and more time spent reading and relating to books as a result of the intervention With greater access, children in the intervention group scored statistically significantly higher than the control group on four of six assessment measures, with gains still very much evident 6 months later in kindergarten. Findings provide powerful support for the physical proximity of books and the psychological support to child care staff on children's early literacy development.

Picture book selection behaviors of emergent readers: Influence of genre, familiarity, and book attributes
Robinson, CC (Robinson, CC); Larsen, JM (Larsen, JM); Haupt, JH (Haupt, JH); Mohlman, J (Mohlman, J)
READING RESEARCH AND INSTRUCTION Volume: 36   Issue: 4   Pages: 287-304
  Published: SUM 1997
Empirical studies with school-aged children have led to assumptions that emergent readers do not have specific reading preferences or demonstrate patterns in their book selections. This study was designed to determine whether emergent readers demonstrate reading preferences based upon genre, familiarity and four other book attributes. Over a seven-week period, 53 preschoolers and 49 kindergartners from two socioeconomic levels were given the opportunity each school day to select a picture book to take home from a set of 40 books with equal representation in five genres. Children's familiarity with the 40 picture books was assessed through a parent survey at the beginning of the study and teachers recorded the titles that were chosen by each child each day during the study. Children's book choices were analyzed by genre, familiarity and four book attributes. Findings demonstrated that emergent readers appear to demonstrate genre preferences (both ages preferred modem and traditional fantasy over realistic fiction, informational and alphabet-number books). Additionally the study found that children select familiar books more often and that especially in the case of kindergartners, familiarity influences reselection. Finally, emergent readers most frequently selected books with a simple text (one to five lines of text per page). The findings of this study counter previously-held assumptions that emergent readers select books randomly or choose them based on convenience of their display. Implications for the role of genre preferences, familiarity and book attributes are discussed.

Drawing

[Controlled Drawing Observation for Assessing a Child's Readiness for School and Predicting Academic Achievement at the End of the First Grade](#)
(EJ914502)

Author(s): [Haidkind, Pille](#); [Kikas, Eve](#); [Henno, Helen](#); [Peets, Terje](#)

Pub Date: 2011-02-00

Source: Scandinavian Journal of Educational Research, v55 n1 p61-78 Feb 2011

Abstract:
Controlled Drawing Observation (CDO) was developed by Tove Krogh and it has been used in Denmark, Finland and Estonia for assessing a child's readiness for school. CDO is a group test, it gives information about a child's functioning in an educational setting and it serves as a starting point for later individual assessment. The goal of the study was to examine the suitability of CDO for assessing a child's readiness for school and predicting school achievement during the transition period from kindergarten to school in Estonia. A total of 112 children were studied longitudinally at two points in time. Forward-stepwise multiple regression analysis showed that results of CDO predict a child's success in mathematics and the Estonian language at the end of the first grade better than teacher reports and the results of individual tests.

Year-long balanced reading/writing tutorial: A design experiment used for dynamic assessment

Abbott, SP (Abbott, SP); Reed, E (Reed, E); Abbott, RD (Abbott, RD); Berninger, VW (Berninger, VW)

Sixteen children referred for severe reading problems in first grade participated in a year-long individual tutorial, The tutorial, which was designed to bring children up to expected level based on ability and grade in reading and writing, lasted from the end of first grade to the end of second grade, Growth curve analyses for the group on measures of orthographic and phonological coding, word identification of real words, word attack of pseudowords, reading comprehension, letter automaticity, and spelling showed that gains were significantly greater than chance, Growth curves for the group were marginally significant for written composition, Individual subject analysis revealed that most children were treatment responders (i.e., growth significantly greater than chance) on most of the measures and all reached expected levels, based on ability or grade, on some of the measures, Results have implications for analysis of response to intervention in reading and writing as a form of dynamic assessment.

The role of maternal mediation of writing to kindergartners in promoting literacy in school: A longitudinal perspective

Aram D.[1]; Levin I.[2]

The current study follows up on Aram and Levin's (2001, *Cognitive Development*, 16, 831–852) analysis of the role of maternal writing mediation among low SES Israeli kindergartners. That study's main finding indicated that the quality of maternal writing mediation correlated concurrently with kindergartners' literacy skills after controlling for socio-cultural measures. The present study followed up the participants to the second grade in school, and evaluated their level of Spelling, Reading Comprehension, and Linguistic Knowledge two and a half years later. The results indicate that the children's literacy measures in school were predicted by maternal writing mediation in kindergarten beyond SES and the early literacy measures assessed in the kindergarten (Word Writing and Linguistic Knowledge). These results highlight the significance of early maternal writing mediation as a major factor in literacy development.

Tier 1 and Tier 2 early intervention for handwriting and composing

Berninger, VW (Berninger, VW); Rutberg, JE (Rutberg, JE); Abbott, RD (Abbott, RD); Garcia, N (Garcia, N); Anderson-Youngstrom, M (Anderson-Youngstrom, M); Brooks, A (Brooks, A); Fulton, C (Fulton, C)

Three studies evaluated Tier I early intervention for handwriting at a critical period for literacy development in first grade and one study evaluated Tier 2 early intervention in the critical period between third and fourth grades for composing on high stakes tests. The results contribute to knowledge of research-supported handwriting and composing instruction that informs practice as school psychologists are empowered to embrace the role of intervention specialist. The first study found that neurodevelopmental training (orthographic-free motor activities and motor-free orthographic activities) led to improved accuracy and legibility of letter formation, but that direct handwriting instruction with visual cues and verbal mediation led to improved automatic handwriting (rate of writing legible letters) and transfer to

improved word reading. The second study found that neither motor training nor orthographic training alone added value to direct instruction in automatic letter writing and composing practice in developing handwriting skills, which transferred to improved word reading; but the added motor training did improve performance on a grapho-motor planning task for sequential finger movements that is relevant to composing. A related analysis showed that direct instruction with visual cues and memory delays may reduce reversals. A third study found that adding handwriting to reading instruction improved handwriting but did not add value to reading outcomes for at risk readers; reading instruction alone was beneficial for word reading, decoding, and comprehension.

What's in a name? Children's name writing and literacy acquisition
Bloodgood, JW (Bloodgood, JW)
READING RESEARCH QUARTERLY Volume: 34   Issue: 3   Pages: 342-367   DOI: 10.1598/RRQ.34.3.5   Published: JUL-SEP 1999
Literacy development among a group of preschool and kindergarten children was examined through changes in the form, function, and perception of their written names. Sixty-seven 3-, 4-, and 5-year-olds, their teachers, instructional aides, and six case-study parents participated in a yearlong qualitative and quantitative study. Literacy skills were assessed in the fall and spring; instructional methods, classroom interactions, and student writing efforts were observed. Preschool and kindergarten teachers and instructional aides as well as the parents of six case-study children responded to interviews and participated in informal discussions of children's early literacy growth. Analysis of assessments and writing samples indicates a substantial role for name in early literacy. Name recognition correlates with age (.86) for 5-year-olds, while name production correlates with alphabet knowledge (.55 to .77), word recognition (.49 to .62), and concept of word (.39 to .66) for 4- and 5-year-olds. Name letters represent approximately 40 percent of children's random-letter written characters. Reciprocal relationships among the children's literacy skills were evident. Automaticity in name writing paralleled control of the alphabet, recognition of several sight words, and emerging tracking ability. Name has the instructional potential to help children connect literacy strands in a meaningful way.

Cognitive constraints and the early learning goals in writing
Bourke, L (Bourke, Lorna)[1]; Adams, AM (Adams, Anne-Marie)[2]
Source: JOURNAL OF RESEARCH IN READING Volume: 33   Issue: 1   Pages: 94-110
  DOI: 10.1111/j.1467-9817.2009.01434.x   Published: FEB 2010
This study examined the relative importance of a number of cognitive factors (i.e. working memory, vocabulary knowledge, general cognitive ability and reading skills) in accounting for differences in the rate of progress made by children in the development of emergent writing skills. Sixty-seven children were assessed on tasks measuring the visuospatial, phonological and central executive components of working memory. The children's written texts were analysed according to the assessment scale for writing from the Early Years Foundation Stage Profile. The results indicate that reading performance and visuospatial memory skills are crucial to determining whether or not children aged 4-5 years are able to meet the UK government's prescribed educational standards for writing. The importance of visual skills in the acquisition of orthographic knowledge and writing conventions gained through reading is discussed in relation to current instructional strategies within schools.

Dunsmuir, S.a c , Blatchford, P.b
Predictors of writing competence in 4- To 7-yearold children
(2004) British Journal of Educational Psychology, 74 (3), pp. 461-483.
http://www.scopus.com/inward/record.url?eid=2-s2.0-4544361901&partnerID=40&md5=76145cc295795bfc9a79d337e99abe77
AFFILIATIONS: Department of Psychology, University College London, United Kingdom; Institute of Education, University of London, United Kingdom; University College London,

Educational Psychology Group, Gower Street, London, WC1E 6BT, United Kingdom
ABSTRACT: Background. This longitudinal study sought to improve understanding of the factors at home and school that influence children's attainment and progress in writing between the ages of 4 and 7 years. Aims. (i) To investigate the relationship between home variables and writing development in preschool children; (ii) to determine associations between child characteristics and writing development (iii) to conduct an analysis of the areas of continuity and discontinuity between variables at home and at school, and influences on subsequent writing development. Sample. Sixty children attending four urban primary schools participated in this study. Method. Semi-structured interviews, questionnaires, observation schedules and standardized assessments were used. Writing samples were collected each term. Associations between measures and continuity over time were assessed using multiple regression analysis. Results. Preschool variables that were found to be significantly associated with writing proficiency at school entry included mother's educational level, family size, parental assessment of writing and a measure of home writing. Child characteristics, skills and competencies were measured at school entry and those found to be significantly associated with writing at 7 years included season of birth, vocabulary score, pre-reading skills, handwriting and proficiency in writing name. The only preschool variable that maintained its significant relationship to writing at 7 years was home writing. Teacher assessments of pupil attitudes to writing were consistently found to be significantly associated with writing competence. Conclusions. This comprehensive study explored the complex interaction of cognitive, affective and contextual processes involved in learning to write, and identified specific features of successful writers. Results are discussed in relation to educational policy and practice issues

Preschool Predictors of Narrative Writing Skills in Elementary School Children (EJ878763)

Abstract:

This study examined the preschool predictors of elementary school narrative writing skills. The sample included 65 typically developing African American children, ranging in age from 5.0 to 5.5 years, and was 44.6% male. Targeted preschool predictors included measures of phonological processing, core language abilities, prereading skills, and early writing concepts assessed during the spring or summer, just before beginning kindergarten. Using hierarchical linear modeling, findings showed that core language abilities, prereading skills, and maternal education at preschool significantly predicted the level of writing in Grades 3-5, but only core language abilities and prereading skills significantly predicted the rate of growth in writing. When kindergartners were separated into low and high readers, and low and high core language abilities, a significant pattern of widening differences emerged between the groups over time. These findings point to core language abilities, prereading skills, and maternal education assessed at kindergarten entry as critical predictors of later narrative writing skills, and they suggest the importance of including such measures when screening for written language problems in early kindergarten and early elementary school.

Determining an Instructional Level for Early Writing Skills

[Parker, DC](Parker, David C.)[1]; [McMaster, KL](McMaster, Kristen L.); [Burns, MK](Burns, Matthew K.)[2]
The instructional level is helpful when identifying an intervention for math or reading, but researchers have yet to investigate whether the instructional-level concept can be applied to early writing. The purpose of this study was to replicate and extend previous research by examining technical features of potential instructional-level criteria for writing. Weekly writing performance was assessed with 85 first-graders over 12 weeks using Picture-Word and Sentence Copying prompts. Data from the students with the highest slopes were used to derive instructional level criteria. Several scoring procedures across Picture-Word and Sentence Copying prompts produced reliable alternate-form correlations and statistically significant relationships with a standardized writing assessment. Determining an instructional level in writing appears feasible; however, further research is needed to examine the instructional utility of this approach.

Early Writing Deficits in Preschoolers With Oral Language Difficulties
Puranik, CS (Puranik, Cynthia S.)[1]; Lonigan, CJ (Lonigan, Christopher J.)[2]
The purpose of this study was to investigate whether preschool children with language impairments (LI), a group with documented reading difficulties, also experience writing difficulties. In addition, a purpose was to examine if the writing outcomes differed when children had concomitant cognitive deficits in addition to oral language problems. A group of 293 preschool children were administered an assessment battery that included measures to examine oral language, nonverbal cognition, emergent reading, and writing. Children were divided into four groups based on their language and cognitive performance. The findings from this study show that as early as preschool, children with weaker oral language skills lag behind their peers with stronger oral language skills in terms of their writing-related skills. Children with oral language and cognitive deficits performed more poorly than children whose deficits were confined to oral language. A child's cognitive ability also has an impact on emergent writing skills, but it appears to be moderated by oral language skills. These results are consistent with research documenting links between preschool language and emergent reading in children with a history of LI.

Write On! Teaching Reading and Writing in the Kindergarten Classroom.
Renz, Lori
2000
Students entering first grade are not prepared to read. They lack the readiness skills that provide the foundation for success. Learning to read and write is a struggle, particularly for those students who have not had a variety of experience with reading and writing prior to entering school. In an effort to increase the readiness skills of at-risk kindergarten students, a strategic intervention using a combination of multilevel reading and writing activities was implemented in the instructional curriculum. Although much of the curriculum is fashioned around the concepts of Hall and Cunningham, additional strategies provided daily supplemental activity. The intent was to determine to what extent the addition of writing exercises led to improvement of reading readiness in the targeted population. The results of this study conclude that students had improved letter recognition and phonemic awareness. Advancements in concepts of print, recognition of sight words, color words, in addition to an increased vocabulary were among the achievements. The participants demonstrated an increased enthusiasm toward reading and writing. Appendixes contain the parent questionnaire and assessment instruments.

A Comparison of Metrics for Scoring Beginning Spelling

Ritchey, Kristen D; Coker, David L, Jr; McCraw, Sara B
Assessment for Effective Intervention vol. 35, no. 2 (Mar 2010), p. 78-88
The authors investigated four spelling scoring metrics: total words correct, correct letter sequences, correct sounds, and phonological coding scoring (developed by Tangel and Blachman) across two studies with children in kindergarten. The relationships between spelling scores and measures of reading, phonological awareness, and writing skills were studied. The scores from each metric were highly correlated. There were moderate to strong relationships between each spelling score and word reading, phonological awareness, letter name fluency, nonsense word fluency, and writing skills. Additionally, each spelling metric was sensitive to growth across 2-month intervals. The results suggest that these scoring metrics provide an equivalent index of spelling skill at a single assessment point and that phonological coding is most sensitive to growth over time.

In-depth analysis of handwriting curriculum and instruction in four kindergarten classrooms
Vander Hart, Nanho[1]; Fitzpatrick, Paula[2]; Cortesa, Cathryn[2]
Reading and Writing, Volume 23, Number 6, July 2010 , pp. 673-699(27)
The quality of handwriting curriculum and instructional practices in actual classrooms was investigated in an in-depth case study of four inner city kindergarten classrooms using quantitative and qualitative methods. The handwriting proficiency of students was also evaluated to assess the impact of the instructional practices observed. The findings suggest that even though teachers employ a number of effective strategies, there is room for improvement in implementing effective, research-approved handwriting instruction. In particular, daily, explicit instruction, writing for fluency, writing from memory, and use of self-evaluation are areas that need improvement. Results indicate that the lack of emphasis on these practices impacted the quality of teaching and learning of handwriting skills. Future research is needed on the impact of teacher training, use of an assessment tool that objectively assesses students' handwriting, use of reading and handwriting curriculum that complement and reinforce one another, and the effectiveness of research-based strategies in practice.
DOI: http://dx.doi.org/10.1007/s11145-009-9178-6

Supporting Beginning Reading in Kindergarten with Independent Writing
Waiser, Marlene; Whiteley, Jan
2001
A research project sought to raise reading achievement among senior Kindergarten students at Doncrest Public School (York, Ontario, Canada) to enable them to reach the Kindergarten reading standard and to maintain this level of reading over the summer months. In response to assessment data, the literacy program in Kindergarten was adapted to include opportunities to strengthen knowledge of high frequency words in reading and writing. Elements of a balanced literacy program which were being used in the Kindergarten classes were maintained. Kindergarten teachers added regular independent writing opportunities to the literacy program and scaffolded the children through the process of writing. Building on the reciprocity between reading and writing, attention was directed toward accessing high frequency words previously introduced in guided reading and interactive writing lessons, to secure these high frequency words for use in reading. Gains were made in word recognition and reading levels, and most of these gains were maintained over the summer months. Gains were not made in knowledge of words for writing. Reasons for this were examined and future programming considered. Includes observation survey results and Kindergarten and Grade 1 reading result.

Early development in written language: Children's emergent knowledge of genre-specific characteristics
Zecker, LB (Zecker, LB)

This investigation explored the emergent knowledge of genre-specific characteristics of twenty kindergartners and twenty first graders, who were invited to compose three types of genre stories, personal letters, and shopping lists at three different times during the school year. Both groups responded to the request to write different types of genre by applying a variety of writing forms. At both grade levels, stories and personal letters were associated with more conventional writing systems than the list. Shopping lists were more consistently associated with less-conventional writing systems within children's repertoires of writing forms. Genre characteristics are suspected to have determined, at least partially, those patterns of association. The children's readings of their own compositions provided substantial information about their developing knowledge of communicative function and form. It was the list and not the narrative that was the best-known genre among children in both groups. Intermediary compositional forms for the story and the personal letter were composed by children at both grade levels as the school year progressed. The findings highlight the flexible nature of young writers' emergent composing process and the importance of genre as an influential factor on that process. It also highlights the limitations of assessing the young authors' knowledge of written language solely on the basis of their written products. Results of the study also raise questions about the preconceived notion of the primacy of the narrative genre over other types of genre during the early years and the implicit notion guiding many writing curricula that graphic aspects of writing should precede compositional undertakings.

Metacognition and Self-regulation

Connor, C.M.a , Ponitz, C.C.b , Phillips, B.M.a , Travis, Q.M.a , Glasney, S.a , Morrison, F.J.c
First graders' literacy and self-regulation gains: The effect of individualizing student instruction
(2010) Journal of School Psychology, 48 (5), pp. 433-455.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
77955919193&partnerID=40&md5=4f3678779c6e5401586575185795838f
Florida State University, Florida Center for Reading Research, United States; University of Virginia Center for the Advanced Study of Teaching and Learning (CASTL), United States; University of Michigan, United States
We examined the effect of individualizing student instruction (ISI; N=445 students, 46 classrooms) on first graders' self-regulation gains compared to a business-as-usual control group. Self-regulation, conceptualized as a constellation of executive skills, was positively associated with academic development. We hypothesized that the ISI intervention's emphasis on teacher planning and organization, classroom management, and the opportunity for students to work independently and in small groups would promote students' self-regulation. We found no main effect of ISI on self-regulation gains. However, for students with weaker initial self-regulation, ISI was associated with greater self-regulation gains compared to peers in control classrooms. The ISI effect on self-regulation was greater when the intervention was more fully implemented.

Assessing reading skill with a think-aloud procedure and latent semantic analysis
Magliano, JP (Magliano, JP); Millis, KK (Millis, KK)
COGNITION AND INSTRUCTION Volume: 21 Issue: 3 Pages: 251-283 DOI: 10.1207/S1532690XCI2103_02 Published: 2003
The viability of assessing reading strategies is studied based on think-aloud protocols combined with Latent Semantic Analysis (LSA). Readers in two studies thought aloud after reading specific focal sentences embedded in two stories. LSA was used to estimate the semantic similarity between readers' think-aloud protocols to the focal sentences and sentences in the stories that provided direct causal antecedents to the focal sentences. Study 1 demonstrated that according to human- and LSA-based assessments of the protocols, the responses of less-skilled readers semantically overlapped more with the focal sentences than with the causal antecedent sentences, whereas the responses of skilled readers overlapped with these sentences equally. In addition, the extent that the semantic overlap with causal antecedents was greater than the overlap with the focal sentences predicted performance on comprehension test questions and the Nelson-Denny test of reading skill. Study 2 replicated these findings and also demonstrated that the semantic overlap scores (based on the protocols) predicted recall for stories that were read silently. Together, the findings supported the viability of developing a computerized assessment tool using verbal protocols and LSA.

Unresolved mysteries: How do metalinguistic and narrative skills connect with early reading?
Author(s): Roth, FP (Roth, FP); Speece, DL (Speece, DL); Cooper, DH (Cooper, DH); DelaPaz, S (DelaPaz, S)
JOURNAL OF SPECIAL EDUCATION Volume: 30 Issue: 3 Pages: 257-277 Published: FAL 1996
In both special education and speech-language pathology literature, it is commonly assumed that children's reading difficulties have their roots in early oral language disabilities. Data to support this assumption are most evident in studies that demonstrate a reciprocal relationship between the metalinguistic skill of phonemic awareness and word decoding. The purpose of this review was to examine the contribution of other oral language abilities to

early reading performance. Specifically, we examined studies that assessed metasemantics, metasyntax/metamorphology, and narrative discourse in relation to word decoding or reading comprehension with children in kindergarten through third grade. We found that although phonemic awareness retained its prominence as a predictor of early reading skills, metasyntactic ability often accounted for significant variance. There was also an indication that narrative discourse skill is related to reading performance. We hypothesize that narrative discourse and other metalinguistic skills may gain importance developmentally once children acquire some initial skill in decoding. An analysis of definitional, measurement, and theoretical issues provides direction for further study.

The Role of Executive Functions Skills and Self-Regulation Behaviors in School Readiness and Adjustment (ED530403)
Sasser, Tyler R.; Bierman, Karen L.
Society for Research on Educational Effectiveness
Pub Date: 2012-00-00
The aim of this study was to examine co-variation in the development of self-regulatory skills evident in pre-kindergarten and evaluate the implications of that variation for school adjustment in kindergarten and first grade. Measures of self-regulatory skill development included: direct assessments of EF (executive function) (e.g., Peg Tapping, DCCS), teacher ratings of attention functioning and impulsivity in the classroom, and observer ratings of attention functioning during academic assessments. The study utilized a person-centered approach (latent profile analysis) to determine whether subgroups of Head Start children showed variations in profiles of self-regulatory skills during the prekindergarten year. It also assessed whether those sub-groups differed in terms of their academic and social-behavioral adjustment at kindergarten and first grade. Because these analyses were exploratory, a priori hypotheses concerning the number of groups and specific profiles were not generated. However, it was anticipated that with direct assessment of EF, teacher-rated inattention and impulsivity, and assessor-rated attention included as continuous predictors, a solution of three or more distinct profiles would result, reflecting more than just level of self-regulation (e.g., high and low), and that these profiles would differ in meaningful ways on measures of academic and social-behavioral school adjustment. Participants included two cohorts of four-year-old children (total N = 164, 14% Latino American, 30% African American, 56% European American; 57% girls) in 22 Head Start classrooms in three counties in Pennsylvania (York, Blair, and Huntingdon). The children were recruited as part of a larger project (Head Start REDI) but did not participate in the intervention. All families met the requirements for participation in Head Start: 68% had incomes below the national poverty level. Forty percent of the children lived in two-parent families, 43 % lived with single mothers, and 17 % lived with relatives or foster families. Overall, 33 % of mothers had not completed high school; 46 % had a graduate equivalent degree (GED) or high school diploma; 19 % had some technical training; and 2 % had graduated from college. The LPA (latent profile analysis) analysis suggests that economically disadvantaged preschoolers are at increased risk for self-regulatory skill deficits, but that heterogeneity exists in the nature of those deficits. It is possible that differential approaches to intervention may therefore be needed. Children with isolated deficits in EF (the low EF class) may benefit primarily from a cognitively-focused intervention that supports EF skill development. Children with behavioral deficits (e.g., elevated impulsivity and inattention in the classroom, such as the dysfunctional class may require an intervention program that supports EF development and provides other environmental supports. Given these developmental links, it is possible that direct assessments of EF and teacher ratings of inattention and impulsivity (even at subclinical levels) may contribute to the identification of children in need of support or services. Given the exploratory nature of the person-centered analyses conducted in this study, future examination is necessary to confirm the profiles that emerged. Confirmation of risk profiles

may further shed light on the development of school readiness problems. (Contains 3 tables.) ERIC Full Text (160K)

Learning Styles And Learning To Read - A Critique
SNIDER, VE (SNIDER, VE)
REMEDIAL AND SPECIAL EDUCATION Volume: 13 Issue: 1 Pages: 6-18 Published: JAN-FEB 1992

This paper examines the application of learning styles to the teaching of reading. The learning styles approach is based on the premise that learning styles can be assessed and the results can be used to determine instructional methods. Viewed in a historical context, learning style is not a new educational trend, but an extension of the well-worn process approaches that have been largely discredited. The application of learning styles to the teaching of reading is critiqued in light of four factors: (a) inability to adequately assess learning styles, (b)failure to acknowledge the necessity of phonics instruction for beginning readers, (c) failure to consider the nature of reading disabilities, and (d) lack of convincing research. This critique suggests that the use of learning styles to prescribe methods of reading instruction must be viewed with skepticism.

Motivation and Persistence

Temperament, selected moderating variables and early reading achievement
Newman, J (Newman, J); Noel, A (Noel, A); Chen, R (Chen, R); Matsopoulos, AS (Matsopoulos, AS)

This study of 397 children provides qualified support for the work of Martin and colleagues in that kindergarten measures of negative emotionality and activity level were correlated with Grade 1 reading measures. The amount of reading achievement variance accounted for by temperament was less than that reported by Martin, however. Our analyses, nevertheless, revealed that persistence plays a significant role in accounting for reading progress. However, intelligence was found to be a moderator variable between persistence and reading achievement. For children with lower intelligence only, persistence significantly predicted reading achievement, the correlation being positive. Using growth curve analysis, we also found that persistence measured in kindergarten was a significant predictor of the growth rate of reading ability for children from kindergarten through third grade. The implications of these results for school psychological assessment processes, classroom instruction, and primary prevention are discussed.

Pakarinen, E.a , Kiuru, N.a , Lerkkanen, M.-K.b , Poikkeus, A.-M.b , Siekkinen, M.c , Nurmi, J.-E.a
Classroom organization and teacher stress predict learning motivation in kindergarten children
AFFILIATIONS: Department of Psychology, University of Jyväskylä, P.O. Box 35, 40014 Jyväskylän Yliopisto, Finland; Department of Teacher Education, University of Jyväskylä, P.O. Box 35, 40014 Jyvaskylan Yliopisto, Finland; Philosophical Faculty, School of Applied Educational Science and Teacher Education, University of Eastern Finland, P.O. Box 111, 80101 Joensuu, Finland
This study examined the extent to which observed teaching practices and self-reported teacher stress predict children's learning motivation and phonological awareness in kindergarten. The pre-reading skills of 1,268 children were measured at the beginning of their kindergarten year. Their learning motivation and phonological awareness were assessed in the following spring. Questionnaires measuring teacher stress were filled out by 137 kindergarten teachers. A pair of trained observers used the Classroom Assessment Scoring System (Pianta et al. 2008) to observe 49 kindergarten teachers from the whole sample on their emotional support, classroom organization, and instructional support. The results of multilevel modeling showed that low teacher stress and high classroom organization predicted high learning motivation in children and that the children's learning motivation contributed to their level of phonological awareness. Moreover, children's learning motivation mediated the association between teacher stress and children's phonological awareness. The results emphasize the importance of teachers' pedagogical well-being and classroom organizational quality for children's learning motivation.

Reading Attitudes and Literacy Skills in Prekindergarten and Kindergarten Children
Sperling R.A.[1]; Head D.M.[2]
The current study addressed the development of reading attitudes and their relationship to reading skills. Forty-one prekindergarten and kindergarten learners in 1 of 3 cohorts were assessed 2 or 4 times during the course of a year. Findings indicated a slight decrease in

reading attitudes during the kindergarten year. Expected increases in skills were generally indicated with pronounced increases in sight word recognition during the kindergarten year, after other skills had been mastered. Decreases in some skills were evident after summer recess. Other findings from the study and recommendations for future research and practice are provided.

Self-concept

Relations between academic self-concept (ASC) and measures of reading-related performance and self-concept were examined in 60 beginning school children who, after 2 years of schooling, were assessed as having positive, negative, or typical ASCs. Data were collected soon after school entry, toward the end of Years 1 and 2, and during the middle of Year 3. Children with negative ASCs performed poorly on reading-related tasks and reported more negative reading self-concepts than did children with positive or typical ASCs. Reading was also highly predictive of negative and positive ASC group membership, but not of typical ASC group membership. Past studies of relations between ASC and achievement involving full-range samples of young children have underestimated the point in time when these factors become causally related to each other. The negative consequences of young children developing patterns of difficulty in learning to read are discussed.

Computer Assisted Assessment

Using Computer-Based Testing with Young Children (ED517565)

Author(s):	Barnes, Susan Kubic	Pub Date:	2010-00-00
Source:	ProQuest LLC, Ph.D. Dissertation, James Madison University	Pub Type(s):	Dissertations/Theses - Doctoral Dissertations

Abstract:

In this era of increased accountability in education, there is a need for tools to use in assessing the abilities and instructional levels of young children. Computers have been used successfully to assess older children and adults. However, there is a dearth of empirical research to provide evidence that computer-based testing (CBT) is appropriate for use with typically developing children under the age of six. The purpose of this study was to explore the feasibility of using CBT with children in preschool and kindergarten. Children were administered paper-and-pencil (PPT) and CBT versions of the rhyme awareness subscale of the Phonological Awareness Literacy Screening (Preschool). After completing each assessment, each child shared individual reactions by selecting a card illustrating an emotion (e.g., joyful, happy, bored, sad, angry) and participating in a brief interview. Parents and teachers completed short questionnaires describing each child's previous computer experience, fine motor skills, and ability to recognize and generate rhymes. An embedded mixed methods design was used to explore (a) to what extent children could complete the CBT independently, (b) how children reacted to the tests, and (c) how the results from the CBT and the PPT compared. Interview transcripts and field notes were used to more fully explain the test results. Findings indicated that preschool and kindergarten children needed help with the CBT. Difficulties were related to using the mouse and following directions. About 12% of the kindergarteners needed adult support to finish the CBT, compared to nearly half of the preschoolers. Children of all ages reported enjoying using the computer and doing the rhyming tasks, however, many preschoolers appeared anxious to leave the testing area or tried to discuss topics unrelated to the assessment. The results provide preliminary evidence that test mode administration does matter. This CBT was more difficult than the PPT for all groups of children. These results have implications for test development and use. CBTs for preschoolers must be designed to meet their physical and cognitive developmental needs. Also, preschool children need adequate practice using computer hardware and software before they can reliably demonstrate their skills and abilities through CBT. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Gender differences in computerised and conventional educational tests
Horne, J (Horne, J.)
JOURNAL OF COMPUTER ASSISTED LEARNING Volume: 23   Issue: 1   Pages: 47-55
  DOI: 10.1111/j.1365-2729.2007.00198.x   Published: FEB 2007
Research has demonstrated girls to outperform boys on conventional literacy tests. The present studies concern gender differences on computerised educational tests. Seventy-one children were tested using LASS Secondary and a set of seven conventional measures. No significant gender differences were found on any of the LASS Secondary modules, although females did outperform males on a conventional spelling test. A further 126 pupils were

tested on computerised and paper versions of the LASS Secondary reading, spelling and reasoning modules. No gender differences were found on the computerised versions, but there were significant differences on the paper versions of the reading and spelling modules favouring females. In a third study, 45 children were administered computerised and paper versions of the LASS Junior reading and spelling modules. There were no significant differences on the computerised modules, but girls performed significantly higher than boys on the paper version of the spelling module. It is possible that computerised assessment does not detect the established gender effect due to differences between males and females in motivation, computer experience and competitiveness. Further large-scale studies are necessary to confirm these findings.

McBride, J.R.a , Ysseldyke, J.b , Milone, M.c , Stickney, E.a
Technical adequacy and cost benefit of four measures of early literacy
(2010) Canadian Journal of School Psychology, 25 (2), pp. 189-204.
http://www.scopus.com/inward/record.url?eid=2-s2.0-77952527075&partnerID=40&md5=087b3f35a923643bca87fb27069b5d59
Renaissance Learning, United States; Department of Educational Psychology, University of Minnesota, United States; Academic Therapy Publications, United States
Technical adequacy and information/cost return were examined for four early reading measures: the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), STAR Early Literacy (SEL), Group Reading Assessment and Diagnostic Evaluation (GRADE), and the Texas Primary Reading Inventory (TPRI). All four assessments were administered to the same students in each of Grades K through 2 over a 5-week period; the samples included 200 students per grade from 7 states. Both SEL and DIBELS were administered twice to establish their retest reliability in each grade. We focused on the convergent validity of each assessment for measuring five critical components of reading development identified by the U.S. National Research Panel: Phonemic awareness, phonics, vocabulary, comprehension, and fluency. DIBELS and TPRI both are asserted to assess all five of these components; GRADE and STAR Early Literacy explicitly measure all except fluency. For all components, correlations among relevant subtests were high and comparable. The pattern of intercorrelations of nonfluency measures with fluency suggests the tests of fluency, vocabulary, comprehension, and word reading are measuring the same underlying construct. A separate cost-benefit study was conducted and showed that STAR Early Literacy was the most cost-effective measure among those studied. In terms of amount of time per unit of test administration or teachers' time, CAT (computerized adaptive testing) in general, and STAR Early Literacy in particular, is an attractive option for early reading assessment.

Identifying reading problems with computer-adaptive assessments
Merrell, C (Merrell, C.); Tymms, P (Tymms, P.)
JOURNAL OF COMPUTER ASSISTED LEARNING Volume: 23   Issue: 1   Pages: 27-35
  DOI: 10.1111/j.1365-2729.2007.00196.x   Published: FEB 2007
This paper describes the development of an adaptive assessment called Interactive Computerised Assessment System (InCAS) that is aimed at children of a wide age and ability range to identify specific reading problems. Rasch measurement has been used to create the equal interval scales that form each part of the assessment. The rationale for the structure and content of InCAS is discussed and then different formats of feedback supplied to teachers are explained. This feedback is accompanied by research-based strategies for remediation, following the principle of 'assessment for learning', which promotes the provision of feedback on how to improve.

Computerized assessment of independent reading: Effects of implementation quality on achievement gain
Topping, KJ (Topping, K. J.); Samuels, J (Samuels, J.); Paul, T (Paul, T.)

This study elaborates the "what works?" question by exploring the effects of variability in program implementation quality on achievement. Particularly, the effects on achievement of computerized assessment of reading were investigated, analyzing data on 51,000 students in Grades 1 - 12 who read over 3 million books. When minimum implementation quality criteria were met, the positive effect of computerized assessment was higher in the earlier grades and for lower achievement students. Implementation quality tended to decline at grade levels. With higher implementation quality, reading achievement gains were higher for students of all levels of achievement and across all grades, but especially in the higher grades. Very high gains and effect sizes were evident with very high implementation quality, particularly in Grades 1 - 4. Implications for practice, the interpretation of research, and policy are noted.

Designing a formative e-assessment: Latent class analysis of early reading skills
Sainsbury, M (Sainsbury, Marian)[1]; Benton, T (Benton, Tom)[1]
Computer-based testing, or e-assessment, has the potential to deliver immediate results for the benefit of schools. This paper describes a project that aimed to exploit this potential by designing e-assessments where the results were intended for use by teachers in planning the next steps in teaching and learning: low-stakes, formative assessment. A pair of tests assessing early reading was developed, with the test items based on a range of distinct skills, including phonological segmentation, rhyming and word recognition. The tests were administered on a screen with the questions presented aurally and visually. In trials, a total of 1345 test results were obtained from pupils aged 5-7 years from 26 schools. Latent class analysis was used to identify patterns of performance within the data. Four latent classes were distinguished, each characterised by a pattern of responses related to the different test items. The strengths and weaknesses in early reading skills implied by each of these latent classes were described in terms of formative 'profiles' provided for teachers in an online reporting package together with indicators for the next steps in teaching. The research resulted in an automated marking and analysis system that can be genuinely formative.

OTHER INTERVENTIONS

Parent Involvement

The role of maternal mediation of writing to kindergartners in promoting literacy in school: A longitudinal perspective
Aram D.[1]; Levin I.[2]

The current study follows up on Aram and Levin's (2001, *Cognitive Development*, 16, 831–852) analysis of the role of maternal writing mediation among low SES Israeli kindergartners. That study's main finding indicated that the quality of maternal writing mediation correlated concurrently with kindergartners' literacy skills after controlling for socio-cultural measures. The present study followed up the participants to the second grade in school, and evaluated their level of Spelling, Reading Comprehension, and Linguistic Knowledge two and a half years later. The results indicate that the children's literacy measures in school were predicted by maternal writing mediation in kindergarten beyond SES and the early literacy measures assessed in the kindergarten (Word Writing and Linguistic Knowledge). These results highlight the significance of early maternal writing mediation as a major factor in literacy development.

Preschoolers' Communicative Functions During Shared Book Reading With Mothers and Fathers
Barachetti, C (Barachetti, Chiara)[1]; Lavelli, M (Lavelli, Manuela)[1]

Research Findings: This study examined whether the communicative behaviors of preschoolers during shared-reading interactions differ according to child age or parent gender. Twenty Italian preschoolers (from 3.1 to 5.11 years) were observed during book reading with each parent separately. Communicative behaviors were analyzed according to the speech act theory. The findings showed that older children produced significantly more requests with fathers than with mothers but significantly more assertions with mothers than with fathers. Sequential analysis showed that only the fathers' reading utterances were significantly followed by older children's requests. These results suggest that older children adjusted their communicative functions to elicit richer conversations from their fathers. Practice or Policy: These findings have implications for the assessment and support of preschoolers' conversational skills.

Maternal Perceptions of Competence and Children's Academic Adjustment: Longitudinal Relations across Early Elementary School
Bouffard, Suzanne[1]; Hill, Nancy[2]

Children's perceptions of their academic ability play an important role in their academic adjustment, but relatively little research has examined the factors affecting academic self perceptions of young children, especially the role of parents. Seventy-seven children and their mothers were followed longitudinally from kindergarten to fourth grade to assess the association between mothers' early perceptions of children's academic abilities in reading and math and children's later academic adjustment. Mothers' perceptions of children's *reading* ability in kindergarten were associated with children's later self-perceptions of academic competence and later achievement, above and beyond kindergarten achievement. However, mothers' perceptions of *math* ability in kindergarten were not significantly associated with later outcomes. In reading, mothers' perceptions of children's *natural talent*

were positively associated with later self-perceptions and mothers' perceptions of children's *difficulty* in school were negatively associated with later self-perceptions. Additionally, mothers' perceptions of children's reading *competence* were positively associated with later reading achievement. This was the youngest sample in which these relations have been examined to date. Longer-term implications for early parental perceptions are discussed. DOI: http://dx.doi.org/10.1007/s11218-005-1327-4

Family reading behavior and early literacy skills in preschool children from low-income backgrounds
Bracken, SS (Bracken, Stacey Storch)[1]; Fischel, JE (Fischel, Janet E.)[2,1]
EARLY EDUCATION AND DEVELOPMENT Volume: 19   Issue: 1   Pages: 45-67   DOI: 10.1080/10409280701838835   Published: JAN-FEB 2008
This study investigated the family reading behavior of 233 preschcol children from low-income backgrounds who were attending Head Start. Parents completed a survey of their family reading behavior, including Child Reading, Parent Reading Interest, and Parent-Child Reading Interaction, and provided demographic data on their educational level, parent and child age and family size. Children's receptive vocabulary, story and print concepts, letter knowledge, and general emergent literacy skills were assessed in the fall of their preschool year. Analyses focused on the variation in family reading behavior, the relationship between different dimensions of family reading behavior, and the contribution of family reading behavior to early literacy skills. Results indicated that Parent-Child Reading Interaction and Child Reading Interest were significantly related to children's early literacy skills. In addition, multiple regression analyses indicated that Parent-Child Reading Interaction was a small yet significant predictor of children's receptive vocabulary, story and print concepts, and general emergent literacy skills, above and beyond the influence of demographic variables. Child Reading Interest was a significant, albeit small, predictor of letter knowledge above and beyond these demographic controls. Implications of these results for the early literacy education of children of low-income families are discussed.

Parents' Perceptions of Children's Reading and Writing Development in a Whole Language Kindergarten Program.
Bruneau, Beverly J.
1989
A study was conducted to determine parents' perceptions of a kindergarten program in the face of change toward a holistic language/literacy curriculum. The participants were the parents of 25 children enrolled in an all day kindergarten class of a university-based child development center. Nine of the parents (all mothers) volunteered to be interviewed individually about parental perceptions of their child's reading and writing development. One theme which was strongly supported was how seriously this group of parents viewed their role in helping their child learn to read and write. One reason for the high degree of acceptance of this approach is that it validates and extends the type of literacy activity that had been occurring in the home. The parents who expressed satisfaction with the whole language kindergarten seemed to feel that the emphasis on informal social interactions and development of positive feelings in children about themselves as readers led their children to reading. Some parents voiced strong concern about helping children with writing through invented spelling and expressed concern about what would happen to their children in first grade. Findings underscore the importance of parents and teachers working together. (The interview protocol is attached.)

Burchinal, M.R.a d , Peisner-Feinberg, E.a b c , Pianta, R.a b c , Howes, C.a b c
Development of academic skills from preschool through second grade: Family and classroom predictors of developmental trajectories
(2002) Journal of School Psychology, 40 (5), pp. 415-436.
http://www.scopus.com/inward/record.url?eid=2-s2.0-

University of North Carolina at Chapel Hill, Chapel Hill, NC, United States;
University of Virginia, Charlottesville, VA, United States; University of California at Los
Angeles, Los Angeles, CA, United States; Frank Porter Graham Child Development Center,
CB #8185, University of North Carolina, Chapel Hill, NC 29599-8185, United States

Children's experiences with their parents and teachers were related to the acquisition of
academic skills from preschool through second grade. Individual and group growth curves
were estimated, and individual patterns of change were predicted from selected
demographic, family, and classroom characteristics to identify multiple pathways to early
academic competence. Standardized assessments of language and academic skills and
parent and teacher surveys were collected on 511 children beginning in the second-to-last
year of child care through the third year of elementary school. As expected, children tended
to show better academic skills across time if their parents had more education and reported
more progressive parenting beliefs and practices. Statistical interactions between family
background and teacher-child relationships indicated that a closer relationship with the
teacher was positively related to language skills for African-American children and to reading
competence for children whose parents reported more authoritarian attitudes. These results
provide further evidence that social processes in classrooms are important for academic
competence for children considered at risk for academic problems.

Attachment and bookreading patterns: A study of mothers, fathers, and their toddlers
Bus, AG (Bus, AG); Belsky, J (Belsky, J); van Ijzendoorn, MH (van Ijzendoorn, MH); Crnic, K
(Crnic, K)

This study, involving 138 families rearing firstborn sons, extends work on bookreading by
relating quality of parent-child interactive exchange during bookreading to contemporaneous
and antecedent assessments of infant-parent attachment security. One parent and the child
were observed when children were 12, 13, 18, and 20 months. At the first and third visit,
infant-mother attachment security was assessed, with infant-father attachment security being
assessed at the second and fourth visit. Following the assessment of attachment security at
18 and 20 months, parent and child were videotaped in a bookreading session. At 18 and 20
months, children responded to the pictures in a book by pointing and labelling, and their
parents tried to initiate these reactions by following predictable routines. In contrast to other
mothers, insecure-avoidant mothers were more inclined to read the verbal text and less
inclined to initiate interactions around the pictures. Insecure-avoidant children were less
inclined to respond to the book and were more distracted. In insecure-resistant dyads,
overcontrolling and overstimulating behavior by the mother appeared to covary with
ambivalence on the part of the children. The results do not support a similar pattern for the
father-child dyads. Implications for family literacy programs are discussed.

Affective dimension of mother-infant picturebook reading
Bus, AG (Bus, AG); van Ijzendoorn, MH (van Ijzendoorn, MH)

Eighty-two mothers with their 44-63-week-old infants were videotaped in the context of
picturebook reading. The Strange Situation procedure was applied to assess infant-mother
attachment security. The observations of mother and infant behavior support the view of
early literacy skills as the outcome of a fundamentally social process. The study shows that
the infants' responses gain significance as denotative symbols through responding at books
together with the mother, and eventually as the infants' responses grow more mature,
through evoking responses and pointing by the mother. These learning/instruction processes
depend on the affective dimension of the infant-mother relationship. Attachment security

appeared to be related to the distraction/disciplining dimension of sharing a picturebook. The discussion goes into some consequences of learning to read as a social process.

Children's preliteracy skills: Influence of mothers' education and beliefs about shared-reading interactions
Curenton, SM (Curenton, Stephanie M.)[1]; Justice, LM (Justice, Laura M.)[2]
Research Findings: This research investigated the associations among children's preliteracy skills, mothers' education, and mothers' beliefs about shared-reading interactions for 45 Appalachian families. These variables were studied for lower income, primarily European American, families residing in a geographically isolated, small, rural community in the Appalachian Mountains. Children's performance on standardized measures of preliteracy skills pertaining to print concepts and alphabet knowledge was substantially lower than normative references, but their performance on tasks assessing their understanding of environmental print was similar to normative references. The preliteracy skills of children with more educated mothers were significantly better than those of children with less educated mothers. More educated mothers had higher ratings on a measure of parental beliefs about shared reading than less educated mothers had; however, maternal reports of the frequency of home literacy practices were similar for both groups. Mediation analyses indicated that mothers' beliefs about shared-reading interactions served as a mediator for the association between maternal education and children's understanding of reading conventions. Practice or Policy: Future directions for research and implications for practice are discussed.

Child Miscues and Parental Feedback During Shared Alphabet Book Reading and Relations With Child Literacy Skills
Davis, BJ (Davis, Bronwen J.); Evans, MA (Evans, Mary Ann)[1]; Reynolds, KP (Reynolds, Kailey Pearl)
We studied 52 parent-child dyads reading an alphabet book to examine the nature of children's miscues and parents' feedback, and whether miscues and feedback were related to each other and to preliteracy skills. Letter knowledge, phonological awareness, and expressive vocabulary were assessed in 5-year-old nonreaders who were also audiotaped reading an alphabet book at home with their parent. Results indicate that after controlling for vocabulary, children with higher phonological awareness more often labeled objects with a name beginning with the page's target letter. Parents provided substantial sustaining feedback after miscues, as though using alphabet books as a way of fostering their child's literacy. Findings highlight the need to consider both the child's skill-base and parent-child interactions to understand the role of alphabet books in literacy development.

Parents as classroom volunteers and kindergarten students' emergent reading skills
DeCusati, CLP (DeCusati, CLP); Johnson, JE (Johnson, JE)
The authors used teacher action research with the design experiment (A. Brown, 1992) to investigate the effects of working with parents in small groups on kindergarten children's emergent literacy performance. The authors randomly assigned 56 children enrolled in the morning and afternoon sessions of the first author's kindergarten class in a rural public school in central Pennsylvania to either the treatment (parent input) or the comparison (no parent input) condition during small-group language enrichment. The authors made pre- and posttreatment assessments on the children's emergent literacy. The authors also interviewed the children for their reactions to having parents in their classroom. Eighteen

parents (15 mothers and 3 fathers) who served to a varying extent as classroom volunteers over 5 months, and other parents who returned questionnaire surveys but did not volunteer in the classroom, also were participants. Results indicated that children in general had positive perceptions of parents' presence in the classroom and that children in the treatment group outperformed comparison-group children on posttreatment measures of word, but not letter, recognition. On the basis of parent self-reports, results also indicated that parents' current reading practices with their children-but not parents' early literacy experiences from their own childhoods-were associated positively and significantly with extent of their classroom volunteer participation. Recommendations for working with parents in the classroom are proffered on the basis of these direct experiences.

Lasting effects of home literacy on reading achievement in school
de Long, PF (de Long, PF); Leseman, PPM (Leseman, PPM)
JOURNAL OF SCHOOL PSYCHOLOGY Volume: 39   Issue: 5   Pages: 389-414
  Published: SEP-OCT 2001
Specific effects of home literacy on the development of word decoding and reading comprehension from first through third grade were examined in an ethnically and social-economically, heterogeneous sample of 69 Dutch children. Home environment pertained to children's opportunity for educational interactions, and parents' instructional and social-emotional quality during literate (joint book reading) and nonliterate (joint problem-solving) activities. Home environment was assessed before first grade; reading achievement at the end of first and third grade. At the end of first grade, oral language skills also were measured. Results revealed that parents' instructional and social-emotional quality had an effect on the development of reading comprehension, but not on word decoding. The effect was found for parental quality during both literate and nonliterate interactions. Finally, the home environmental effect was mediated by children's oral language skills in first grade, which lends support it) a pragmatic oral language route to reading comprehension.

Putting parents in the picture: Maternal reports of preschoolers' literacy as a predictor of early reading
Dickinson, DK (Dickinson, DK)
EARLY CHILDHOOD RESEARCH QUARTERLY Volume: 13   Issue: 2   Pages: 241-261
  DOI: 10.1016/S0885-2006(99)80037-4   Published: 1998
Emergent literacy research has demonstrated that children begin constructing notions of literacy during the preschool years and that early experiences support children's literacy growth. Given that parents may have valuable insight into their preschool children's Literacy development, we examined the hypothesis that parental reports from the preschool years could be good predictors of early literacy development once their children enter school. Drawing on data from a longitudinal study of literacy development among low-income children, we correlate reports prepared by parents when their children were three and four years old with the children's subsequent performance on individually administered tests in kindergarten and grade one and grade one teachers' evaluations of children. Correlational analyses reveal significant correlations between parental reports and grade one teacher reports and assessments. Regression models reveal that parental reports account for about a quarter of the variance in! kindergarten tests and grade one teacher assessments and over a third of the variance in a decoding assessment given near the end of first grade.

Putting Parents in the Picture: Maternal Reports of Preschoolers' Literacy as a Predictor of Early Reading
Dickinson D.K.; DeTemple J.
Early Childhood Research Quarterly, Volume 13, Number 2, 1998 , pp. 241-261(21)
Emergent literacy research has demonstrated that children begin constructing notions of literacy during the preschool years and that early experiences support children's literacy growth. Given that parents may have valuable insight into their preschool children's literacy

development, we examined the hypothesis that parental reports from the preschool years could be good predictors of early literacy development once their children enter school. Drawing on data from a longitudinal study of literacy development among low-income children, we correlate reports prepared by parents when their children were three and four years old with the children's subsequent performance on individually administered tests in kindergarten and grade one and grade one teachers' evaluations of children. Correlational analyses reveal significant correlations between parental reports and grade one teacher reports and assessments. Regression models reveal that parental reports account for about a quarter of the variance in kindergarten tests and grade one teacher assessments and over a third of the variance in a decoding assessment given near the end of first grade.

The impact of early maternal verbal scaffolding and child language abilities on later decoding and reading comprehension skills
Dieterich, SE (Dieterich, SE); Assel, MA (Assel, MA); Swank, P (Swank, P); Smith, KE (Smith, KE); Landry, SH (Landry, SH)
This study examined, via structural equation modeling, early predictors of children's 8 year reading decoding and 10 year comprehension at later school age. Maternal verbal scaffolding indirectly influenced both decoding and comprehension, through its support of children's language abilities at 3 and 4 years of age. Additionally, there was a trend for a direct effect of 4 year child language on reading comprehension at 10 years. As maternal verbal scaffolding was assessed during every day routines, this suggests that rich language input in the broad social context of the home promotes language and, in turn, later reading skills. Given that maternal verbal scaffolding can be enhanced through interventions, these results have important educational implications.

Academic and cognitive functioning in first grade: Associations with earlier home and child care predictors and with concurrent home and classroom experiences
Downer, JT (Downer, Jason T.); Pianta, RC (Pianta, Robert C.)
Family and child care experiences from birth to 54 months, achievement and social competence at entry to school, maternal sensitivity at first grade, and qualities of first-grade classrooms were used to predict academic and cognitive functioning at first grade for 832 children enrolled in the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care. Repeated assessments of functioning from preschool to first grade indicated that individual differences in academic and cognitive functioning over the course of two years were relatively stable. In regression models that predicted relative change in cognitive ability from 54 months to first grade, child gender and race, family income-to-needs ratio, maternal education and sensitivity, and home learning environment were significant predictors. Preschool academic cognitive functioning served as a significant mediator between child characteristics, early family factors, child care quality, and first-grade child outcomes. Children's social competence prior to school entry served a secondary yet significant mediating role between early experience and elementary school academic functioning. Upon controlling for early home and child care factors, classrooms that spent more time on literacy, language, and math instruction were associated with higher scores on tests of reading achievement, phoneme knowledge, and long-term retrieval.

Predictors and outcomes of low-income fathers' reading with their toddlers
Duursma, E (Duursma, Elisabeth)[1]; Pan, BA (Pan, Barbara Alexander)[1]; Raikes, H (Raikes, Helen)[2]

Most studies of parent-child bookreading have focused on mothers reading to their children. Though the role of fathers in children's lives is widely emphasized, we know almost nothing about father-child bookreading, particularly among low-income families. The present study was designed to examine how often low-income fathers report reading to their children and what the predictors and effects of paternal bookreading are. The fathers in this study were participants in the national evaluation of Early Head Start (EHS) and were recruited via mothers enrolled in the EHS study. Participating fathers were interviewed at home and their children's cognitive and language development were assessed using standardized measures from ages 2 to 5. Results demonstrated a wide variety in frequency of bookreading among fathers. Fathers were more likely to read to their children frequently if they spoke English at home, if they had a high school education, and if their children had better language skills. Fathers' bookreading predicted children's cognitive outcome. Paternal bookreading did predict children's language outcomes but only for children whose fathers had at least a high school education.

Erion, J.a b
Parent tutoring: A meta-analysis
(2006) Education and Treatment of Children, 29 (1), pp. 79-106.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
33749515787&partnerID=40&md5=608d6640f2fc5d8b64632747ca660db1
Edinboro University of Pennsylvania, United States; Department of Special Education and School Psychology, Edinboro University of Pennsylvania, 117 Butterfield Hall, Edinboro, PA 16444, United States
This article provides a synthesis of research in which parents provided academic instruction to their own children. The effectiveness of parent tutoring in 37 studies was examined across grade level, basic skill area (e.g., reading, math), training feature (e.g., treatment length, availability of consultation), treatment fidelity, type of assessment (i.e. criterion-referenced or norm-referenced), and whether or not the study was published. Thirty-two comparisons were found for 20 group design studies and 25 comparisons were found for 17 single subject design studies. Separate analyses were conducted for group design and single-subject design studies using standardized mean difference between experimental and control groups, and percentage of non-overlapping data (PND), respectively. Effect size (ES) and PND were generally positive across both types of studies. A mean weighted ES of +0.55 was obtained for trimmed group design studies and a median PND of 94 was obtained for the single subject studies. Most studies involved reading and the use of primary grade students as subjects. Certain treatment characteristics appeared to moderate outcome. Implications of the current analysis for future practice and research in the area of parent tutoring are discussed.

Parent involvement and reading: Using curriculum-based measurement to assess the effects of paired reading
Fiala, CL (Fiala, CL); Sheridan, SM (Sheridan, SM)
PSYCHOLOGY IN THE SCHOOLS Volume: 40   Issue: 6   Pages: 613-626   DOI: 10.1002/pits.10128   Published: NOV 2003
This study examined the effectiveness of a paired reading intervention using curriculum-based measurement (CBM) probes to document reading progress for one fourth- and two third-grade students. These students were considered below-average readers. Parents and children used the paired reading method in their homes for 10 minutes, four times a week. Children and parents were also provided with reading material at their instructional level. Results showed that the children's reading accuracy and rates increased from baseline to follow-up on CBM measures and on pre/posttesting. In addition, students and parents gave favorable treatment acceptability ratings for paired reading. Implications for future research are outlined.

Head start parents' beliefs about their children's abilities, task values, and performances on different activities
Galper, A (Galper, A); Wigfield, A (Wigfield, A); Seefeldt, C (Seefeldt, C)

Abstract: As part of a larger intervention study designed to facilitate the transition of Head Start children into kindergarten and the early elementary grades, we assessed parents' beliefs about former Head Start children's abilities and values in several activity domains-academics, sports, and social skills-during the children's kindergarten year. Parents' expectations for their children's future also were examined. One hundred and twenty-four parents and 155 children participated; all children had attended Head Start, and the sample is ethnically and racially diverse. One group of children and parents received the additional services, and a second group did not. Parents were quite optimistic about their children's prospects for the future. There were ethnic differences in parents' beliefs about children's abilities and future prospects in different areas. Parents' beliefs related both to children's attitudes toward school and to their performance on mathematics and reading achievement tests.

Shared book reading and children's language comprehension skills: the moderating role of parental discipline practices
Gest, SD (Gest, SD); Freeman, NR (Freeman, NR); Domitrovich, CE (Domitrovich, CE); Welsh, JA (Welsh, JA)

Parental discipline practices, parent-child shared book reading and children's emergent literacy skills were assessed among 76 parents and their children in the summer before the children started Kindergarten. Parents provided narrative responses to open-ended questions about how they would handle common discipline challenges with children and rated their likelihood of using physical punishment. Parents also reported the number of books they read with their children each week and completed a checklist assessing their familiarity with the titles and authors of children's books. Children's emergent literacy skills were assessed with individually administered tests. Analyses of covariance indicated that shared book reading was reliably associated with children's language comprehension skills only among parents whose responses to discipline scenarios included relatively high levels of nondirective reasoning. Parents who expressed a willingness to consider physical punishment had children with lower language comprehension skills regardless of the quantity of shared book reading. These effects were reliable after taking into account the effects of parental education and children's nonverbal reasoning skills.

Mothers' extratextual comments during storybook reading: Stylistic differences over time and across texts
Haden, CA (Haden, CA); Reese, E (Reese, E); Fivush, R (Fivush, R)

This study examines longitudinally how mothers structure shared book reading interactions with their children across the preschool period, focusing on possible individual stylistic differences in White, middle-class mothers' extratextual comments. Analyses addressed consistency of individual maternal styles over time and comparability of storybook reading styles across familiar and unfamiliar stories. At each of two time points, when the children were 40 and 58 months old, mothers read an unfamiliar and a familiar storybook with their children. For readings of each book type, three distinct maternal stylistic groups were found: Describers, Comprehenders, and Collaborators. Most importantly, maternal storybook reading styles are reasonably consistent over the 18-month time course of study, bur are considerably less consistent across types of books. Further, results suggest that these

storybook reading styles related differentially to children's print and story skills assessed at 70 months of age. Implications of these individual differences among mothers for emergent literacy are discussed.

Sharing books with babies: evaluation of an early literacy intervention [1]
Hardman, M (Hardman, M); Jones, L (Jones, L)
EDUCATIONAL REVIEW Volume: 51   Issue: 3   Pages: 221-229   Published: NOV 1999
This paper reports an evaluation of an early book reading literacy initiative the Kirklees 'Babies into Books' project. Baby Book Bags, including a free book and other literacy information, were given to 40 care givers in two targeted areas when their baby was 7 months old, together with an invitation to join a literacy support group. All care givers were interviewed to assess book-related activity in the home when given the Baby Book Bag. Second interviews two months later with 20 care givers revealed significant differences in terms of increases in the number of books owned by the baby, frequency of baby reaching for books and mother and baby looking at children's books and catalogues. These results, and comparison with a control group, confirm the value of this type of very early intervention.

Supporting young children's literacy learning through home-school partnerships: The effectiveness of a home repeated-reading intervention
Hindin, A (Hindin, Alisa); Paratore, JR (Paratore, Jeanne R.)
Source: JOURNAL OF LITERACY RESEARCH Volume: 39   Issue: 3   Pages: 307-333   Published: 2007
The purpose of this study was to examine the effectiveness of a home repeated reading intervention on the reading achievement of eight low-performing secondgrade children in an urban school by taking into consideration their need to develop automaticity and the role their parents play in this process. Specifically we posed the following questions: Does participation in a home repeated reading intervention improve children's (a) reading accuracy, (b) reading fluency, and (c) reading skills on an independent reading task? When parents participate in a home repeated reading intervention, (a) what word-study strategies do they use to support their children's reading and (b) how do the strategies they use influence children's subsequent word errors? A multiple-baseline across-subjects design and a pre-post design were used to assess the effectiveness of the intervention. Results indicated that all participants made substantially fewer reading errors during the intervention as compared to their performance on baseline stories. All participants demonstrated decreased error rates from the first to the last reading of stories, and significant fluency gains were evident in all cases when comparing mean baseline fluency with mean intervention fluency. All participants made considerable gains in fluency from the first to the last reading of each story, and all children improved on an independent reading measure. All participants read more than 10,000 words during the home intervention. Parents monitored their children's home reading. Four parents provided substantial word-level support, and the children who received this support made fewer repeated reading errors.

Preschool home literacy practices and children's literacy development: A longitudinal analysis
Hood, M (Hood, Michelle)[1]; Conlon, E (Conlon, Elizabeth)[1]; Andrews, G (Andrews, Glenda)[1]:
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 100   Issue: 2   Pages: 252-271   DOI: 10.1037/0022-0663.100.2.252   Published: MAY 2008
In this 3-year longitudinal study, the authors tested and extended M. Senechal and J. Le Fevre's (2002) model of the relationships between preschool home literacy practices and children's literacy and language development. Parent-child reading (Home Literacy Environment Questionnaire plus a children's Title Recognition Test) and parental teaching of letters, words, and name writing were assessed 6 months prior to children's school entry. The 143 children (55% male participants; mean age = 5.36 years, SD = 0.29) attended Gold Coast, Australia government preschools. Parent-child reading and literacy teaching were

only weakly correlated (r =.18) and were related to different outcomes consistent with the original model. Age, gender, memory. and nonverbal ability were controlled. Parental teaching was independently related to R. W. Woodcock's (1997) preschool Letter-Word Identification scores (R-change(2) = 4.58%, p =.008). This relationship then mediated the relationships between parental teaching and Grades 1 and 2 letter-word identification, single-word reading and spelling rates, and phonological awareness (rhyme detection and phonological deletion). Parent-child reading was independently related to Grade 1 vocabulary (R-change(2) = 5.6%, p =.005). Thus, both home practices are relevant but to different aspects of literacy and language development.

A Meta-Analysis of the Efficacy of Different Types of Parental Involvement Programs for Urban Students (EJ969713)

Author(s): Jeynes, William   Pub Date: 2012-07-00

Source: Urban Education, v47 n4 p706-
           742 Jul 2012

Abstract:
This meta-analysis of 51 studies examines the relationship between various kinds of parental involvement programs and the academic achievement of pre-kindergarten-12th-grade school children. Analyses determined the effect sizes for various parental involvement programs overall and subcategories of involvement. Results indicate a significant relationship between parental involvement programs overall and academic achievement, both for younger (preelementary and elementary school) and older (secondary school) students as well as for four types of parental involvement programs. Parental involvement programs, as a whole, were associated with higher academic achievement by 0.3 of a standard deviation unit. The significance of these results is discussed.

The Development Of A Parent-Tutor Assessment Scale
JOHNSON, JH (JOHNSON, JH); JASON, LA (JASON, LA)
URBAN EDUCATION Volume: 29 Issue: 1 Pages: 22-33 DOI: 10.1177/0042085994029001003 Published: APR 1994
A new measure of parent-tutoring support for elementary-age children, the Parent-Tutor Assessment (PTA), is described. The PTA assesses parents' tutoring behaviors, their competency and motivation to tutor and parent-child communication. The PTA total score was related to students' academic, social, and behavioral adjustment in school. The PTA total score discriminated between samples of high- and low-support parents. Students who received greater parent-tutoring support tended to achieve significantly higher grades in reading, spelling, and mathematics than did less supported children.

Maternal evaluations of children's emergent literacy level, maternal mediation in book reading, and children's emergent literacy level: A comparison between SES groups
Author(s): Korat, O (Korat, Ofra); Haglili, S (Haglili, Sharon)
Source: JOURNAL OF LITERACY RESEARCH Volume: 39 Issue: 2 Pages: 249-276
 Published: 2007
This study examined whether maternal evaluations of children's emergent literacy (EL) levels, maternal mediation during a book-reading activity with children, and the children's EL levels differ as a function of socioeconomic status (SES; low vs. high), and whether the relationships between these variables differ as a function of SES levels. Study participants included 84 kindergarteners, 41 from low SES (LSES) and 43 from high (HSES) families, and their mothers. Maternal evaluations of their children's EL levels were gathered, mother-

child interactions in a book-reading activity were videotaped, and the children's EL levels were independently assessed. LSES mothers were less accurate in evaluating their children's EL levels and exhibited lower mediation levels in the book-reading interactions. Their children exhibited lower EL levels than did the children in the HSES group. In the HSES group, children's EL levels were explained by maternal evaluations and by maternal mediation levels. HSES maternal mediation levels while book reading were explained by their children's EL levels. No such relationships appeared between these variables in the LSES group. Suggestions for educational practices and further research are discussed.

Maternal mediation in book reading, home literacy environment, and children's emergent literacy: a comparison between two social groups

Korat, O (Korat, Ofra); Klein, P (Klein, Pnina); Segal-Drori, O (Segal-Drori, Ora)
The researchers addressed two questions: (1) Does maternal reading mediation and family home literacy environment (HLE) relate to children's emergent literacy (EL) level? and (2) Do the relationships among these variables differ as a function of socioeconomic strata (SES) level. A total of 94 5-6-year-old children, 47 from low SES (LSES) and 47 from high (HSES) families, and their mothers participated. Mother-child interactions while reading an unfamiliar book were videotaped and their verbal expressions were coded for extracting maternal mediation level. Children's independent EL level was assessed prior to the interaction. Compared with the LSES group, HSES children showed higher EL levels and their homes had a richer literacy environment. Maternal mediation level differed by SES: LSES mothers paraphrased text more often; HSES mothers' higher mediation level included a discussion of the written system and making connections beyond the text. In the HSES group, maternal mediation level and HLE related to children's EL; no such relationships appeared in the LSES group. Results are discussed in terms of children's socio-economic background and their reading experiences. Implications for researchers and educational practices about the relationships between children's literacy development, SES, HLE, and parental mediation are discussed.

Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement

Leseman, PPM (Leseman, PPM); de Jong, PF (de Jong, PF)
Home literacy is considered a multifaceted phenomenon consisting of a frequency or exposure facet (opportunity), an instruction quality facet, a parent-child cooperation facet, and a social-emotional quality facet. In a multiethnic, partly bilingual sample of 89 families with 4-year-old children, living in inner-city areas in the Netherlands, measures of home literacy were taken by means of interviews with the parents and observations of parent-child book reading interactions when the target children were ages 4, 5, and 6 years. Ar age 7, by the end of Grade 1, after nearly 1 year of formal reading instruction, vocabulary, word decoding, and reading comprehension were assessed using standard tests. Vocabulary at age 4 and an index of the predominant language used at home were also measured in order to be used as covariates. Correlational and multiple regression analyses supported the hypothesis that home literacy is multifaceted. Home literacy facets together predicted more variance in language and achievement measures at age 7 than each of them separately. Structural equations analysis also supported two additional hypotheses of the present research. First, the effects of background factors (SES, ethnicity, parents' own literacy practices) on language development and reading achievement in school were partly mediated by home literacy, home language, and early vocabulary. Second, even after controlling for the effects of early vocabulary and predominant home language, there

remained statistically significant effects of home literacy, in particular, opportunity, instruction quality, and cooperation quality.

Mother-child joint writing and storybook reading and their effects on kindergartners' literacy: an intervention study

Levin, I (Levin, Iris)[1]; Aram, D (Aram, Dorit)[1]
This study assessed the effects of three different intervention programs on low-SES mother-child joint activities and on their kindergarten-age children's progress in early literacy and language. Parents in three groups (119 mothers, 5 fathers) were coached to mediate child learning, respectively, in: interactive storybook reading, writing, or visuomotor skills. A group-specific workshop was followed by 7 weeks of tri-weekly structured dyadic interactions and weekly tutorial home visits. A fourth group (control) received no intervention. Results showed implementation success: Mothers coached in interactive storybook reading or writing mediation improved in the coached activity from pretest to immediate posttest and to delayed posttest. Interactive storybook reading improved less for older than younger children, whereas writing mediation improved more for older than younger children. No transfer emerged from one activity to the other: Coaching on reading had no effect on writing or visuomotor skills, and coaching of writing had an effect only on writing. Children's alphabetic skills were enhanced in the writing mediation-coached group, whereas linguistic competencies, unexpectedly, were not enhanced in the interactive storybook reading-coached group. The significance of writing mediation as a dyadic activity promoting literacy is emphasized.

Merlo, L.J.a b , Bowman, M.a , Barnett, D.a
Parental nurturance promotes reading acquisition in low socioeconomic status children
http://www.scopus.com/inward/record.url?eid=2-s2.0-34248353533&partnerID=40&md5=a4c7cf3d92c30488b3e59f7aed5d3e8d
Department of Psychology, Wayne State University, United States; Department of Psychiatry, University of Honda, P.O. Box 100234, Gainesville, FL 32610-0234, United States
Research Findings: Children require cognitive skills (e.g., phoneme awareness, verbal intelligence) and environmental resources (e.g., stimulation, print exposure) to acquire reading. This investigation examined the additional contribution of parental nurturance to literacy development during the transition from preschool to elementary school. Participants were 77 children attending Head Start, their primary caregivers, and their teachers. A variety of methods were used to measure nurturance (e.g., self-report, laboratory observation, home observation) and reading achievement (e.g., standardized testing and teacher report). Approximately 31/2 years later, 52 families and 39 teachers were available for repeat assessments of children's reading achievement. After controlling for the variance accounted for by prior reading ability, phonological awareness, verbal reasoning ability, and home academic stimulation, parental nurturance made a significant unique contribution to children's growth in reading achievement. Results supported the hypothesis that caregiver nurturance can be an important ingredient in the recipe for literacy. Practice: The findings have important implications for the design of interventions for children with low reading achievement. By understanding the various ways in which parents foster reading, interventions can be developed to bolster parental nurturance and support the role of nurturance in promoting children's development in all areas, including intellectual and academic functioning.

Nelson, R.F.
The impact of ready environments on achievement in kindergarten

Western Michigan University, United States

The purpose of this study was to examine how young children's homes and preschool programs influence kindergarten achievement by being "ready environments." Ready environments provide opportunities for cognitive and social growth through culturally and developmentally appropriate activities, interactions, and materials. This study used kindergarten assessments, and parent and teacher questionnaires from the Early Childhood Longitudinal Study-Kindergarten Cohort database. Data from more than 10,000 kindergarten children were analyzed to determine if learning activities in the home and preschool attendance had an impact on young children's cognitive skills in kindergarten. The results showed that learning activities in the home had an influence on children's approaches to learning. Preschool attendance had a significant positive effect on children's reading and math achievement in kindergarten. Recommendations for how to support parents and increase preschool attendance for all children are provided.

Parental influence on child interest in shared picture book reading
Ortiz, C (Ortiz, C); Stowe, RM (Stowe, RM); Arnold, DH (Arnold, DH)
EARLY CHILDHOOD RESEARCH QUARTERLY Volume: 16   Issue: 2   Pages: 263-281
  DOI: 10.1016/S0885-2006(01)00101-6   Published: 2001
Children's early interest in shared reading is thought to be important to later reading achievement. However, influences on such interest have not been adequately studied. The present study evaluated whether parents can affect their children's interest in shared reading, using a multimethod assessment. Twenty-five parents and their preschool-aged children were randomly assigned to either an intervention group or an attention-control group. Parents in the interest intervention group learned strategies thought to be important to fostering interest in shared reading. After one week, children in the intervention group were more interested in shared reading compared to children in the attention control group. After four weeks, intervention parents still reported increased child interest, though direct observations suggested somewhat diminished effects. These results provide a rare experimental evaluation of parental influence on interest, and suggest potential value in further developing interest interventions.

Porter DeCusati, C.L.a , Johnson, J.E.b c
Parents as classroom volunteers and kindergarten students' emergent reading skills
(2004) Journal of Educational Research, 97 (5), pp. 235-246.
http://www.scopus.com/inward/record.url?eid=2-s2.0-
2442488739&partnerID=40&md5=f5360ca6c42e695eac9b6a096f0c2e7c
Marion Walker Elem. Sch. PA, United States; Pennsylvania State University, University Park, PA, United States; 145 Chambers, University Park, PA 16802, United States
The authors used teacher action research with the design experiment (A. Brown, 1992) to investigate the effects of working with parents in small groups on kindergarten children's emergent literacy performance. The authors randomly assigned 56 children enrolled in the morning and afternoon sessions of the first author's kindergarten class in a rural public school in central Pennsylvania to either the treatment (parent input) or the comparison (no parent input) condition during small-group language enrichment. The authors made pre- and posttreatment assessments on the children's emergent literacy. The authors also interviewed the children for their reactions to having parents in their classroom. Eighteen parents (15 mothers and 3 fathers) who served to a varying extent as classroom volunteers over 5 months, and other parents who returned questionnaire surveys but did not volunteer in the classroom, also were participants. Results indicated that children in general had positive perceptions of parents' presence in the classroom and that children in the treatment group outperformed comparison-group children on posttreatment measures of word, but not

letter, recognition. On the basis of parent self-reports, results also indicated that parents' current reading practices with their children-but not parents' early literacy experiences from their own childhoods-were associated positively and significantly with extent of their classroom volunteer participation. Recommendations for working with parents in the classroom are proffered on the basis of these direct experiences.

Teaching parents to use research-supported systematic strategies to tutor their children in reading
Resetar, JL (Resetar, Jennifer L.); Noell, GH (Noell, George H.); Pellegrin, AL (Pellegrin, Angie L.)
SCHOOL PSYCHOLOGY QUARTERLY Volume: 21   Issue: 3   Pages: 241-261   DOI: 10.1521/scpq.2006.21.3.241   Published: FAL 2006
This study investigated the efficacy of a method of parent training and parent reading tutoring that built on past research. Parents of five first-grade children who were reading below grade level participated. Parents were trained to implement a tutoring procedure that included modeling, practice, phonics, fluency building, accuracy building, comprehension, and reinforcement components. Assessment of audiotape recordings and permanent products indicated high levels of treatment integrity. A multiple baseline across participants design was used to assess the results. Four of the five children exhibited an increase in words read correctly per minute on tutored reading passages. Issues that arose in the implementation of this study are discussed, as well as research regarding how to tailor home tutoring procedures to parent-child dyads.

The influence of selecting and taking picture books home on the at-home reading behaviors of kindergarten children
Robinson, CC (Robinson, CC); Larsen, JM (Larsen, JM); Haupt, JH (Haupt, JH)
READING RESEARCH AND INSTRUCTION Volume: 35   Issue: 3   Pages: 249-259
  Published: SPR 1996
This study investigated the influence of selecting and taking home high quality picture books on the at-home reading behaviors of kindergartners. The sample consisted of 75 kindergartners in treatment and no-treatment comparison groups representing two socioeconomic levels. Over a twelve week period treatment group children selected from their classroom collection a book to take home daily. No-treatment comparison group children did not take books home. At-home picture book reading behaviors of both study groups were assessed through weekly random telephone surveys. Findings indicated that the number of books and the amount of time treatment group children read and/or were read to by family members significantly increased over no-treatment comparison children, especially for boys.

Caregiver-child interactions and early literacy development of preschool children from low-income environments
Rush, KL (Rush, KL)
TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION Volume: 19   Issue: 1   Pages: 3-14   DOI: 10.1177/027112149901900101   Published: SPR 1999
Children growing up in low-income environments have lower-than-average levels of reading achievement and higher-than-average rates of special education placement. Research suggests that this discrepancy can be linked to differences in experiences during the early childhood years. A group of Head Start children's (n = 39) early literacy skills (letter-naming, phoneme blending, and onset recognition) and expressive and receptive vocabulary skills were assessed and correlated with measures of caregiver-child interactions observed in the home. Caregivers also were asked to report rates of early literacy activities. Results indicated that the children in Head Start demonstrated a range of early literacy and language abilities, and variation in these skills was related to some aspects of the children's home environments. In particular, degree of caregiver involvement, rate of language interactions,

and participation in early literacy activities were related to early literacy and language skills. This exploratory research provides a basis for experimental research to determine the effects of manipulating these caregiver variables on early literacy development.

Relations among maternal literacy beliefs, home literacy practices, and the emergent literacy skills of preschoolers with specific language impairment
Skibbe, LE (Skibbe, Lori E.)[1]; Justice, LM (Justice, Laura M.)[2]; Zucker, TA (Zucker, Tricia A.)[3]; McGinty, AS (McGinty, Anita S.)[3]
Self-reported maternal literacy beliefs and home literacy practices were compared for families of children with typically developing language skills (TL, n = 52) and specific language impairment (SLI, n = 56). Additionally, the present work examined whether maternal beliefs and practices predicted children's print-related knowledge. Mothers filled out 2 questionnaires asking about their literacy beliefs and practices while children's print-related knowledge was assessed directly. Results indicated that mothers of children with SLI held somewhat less positive beliefs about literacy and reported engaging in fewer literacy practices compared to mothers of children with TL. For the entire sample, maternal literacy practices and beliefs predicted children's print-related knowledge, although much of this association was accounted for by maternal education. Subgroup analyses focused specifically on children with SLI showed there to be no relation between maternal literacy beliefs and practices and children's print-related knowledge. The present findings suggest that the home literacy experiences of children with SLI, and the way that these experiences impact print-related knowledge, may differ in important ways from typical peers.

The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development
Sonnenschein S.; Munsterman K.
In order to understand the impact of home-based reading practices on young children's literacy development, we need to consider both the types of comments made while reading as well as the affective quality of the reading interaction. Five-year-olds, during the summer prior to kindergarten, were observed reading both a familiar and an unfamiliar book with a member of their family, usually a parent but in one-third of the cases, an older sibling. Children came from either African-American or European-American families. Most of the children (about 83%) came from low income families. Both the nature of comments made about each book and the affective quality of the interactions were coded. Parents also were interviewed about the frequency with which their children engaged in reading activities at home. Children's phonological awareness, orientation toward print, and story comprehension were assessed during the spring of kindergarten; their motivations for reading were assessed at the start of first grade.Comments about the content of the storybook were the most common type of utterance during reading interactions. Reported reading frequency was the only significant correlate of children's early literacy-related skills. In contrast, the affective quality of the reading interaction was the most powerful predictor of children's motivations for reading. These results emphasize the importance of the affective quality of reading interactions for fostering children's interest in literacy.

Kindergarten Students Awareness Of Reading At Home And In School
STEWART, J (STEWART, J)
This study investigated children's awareness of how they are learning to read at home and in school. Fifty-six kindergarten children were selected from two schools that used different

instruction for beginning reading. In one school the instruction was individualized and emphasized a whole language approach but with language experience activities, shared reading and writing, and phonics. Instruction in the other school was structured around a commercial phonics-based beginning reading program that emphasized whole-class instruction. The children were interviewed and asked questions designed to tap their awareness of how they were learning to read in March and May of kindergarten and September of first grade. An early reading test was administered in September and May of the kindergarten school year to relate awareness to reading achievement. A parent questionnaire was administered to assess home support for early reading. The children's awareness responses were analyzed to determine how they described learning to read and what they said they used when learning to read. The overall results demonstrated that kindergarten children can describe how they are learning to read at home and in school. Other relevant findings were that the responses match home literacy and school instruction and change over time. Instructional setting was a salient feature in that children who received individualized and small-group instruction gave more detailed and comprehensive responses than did the children who received phonics-based instruction.

Parent Training In Interactive Book Reading - An Investigation Of Its Effects With Families At Risk
TAVERNE, A (TAVERNE, A); SHERIDAN, SM (SHERIDAN, SM)
SCHOOL PSYCHOLOGY QUARTERLY Volume: 10 Issue: 1 Pages: 41-64 DOI: 10.1037/h0088298 Published: SPR 1995
This study investigated the efficacy of a parent training intervention on increasing the duration, frequency and quality of interactive book reading between six parents and their children. Dependent measures included self-reports of frequency and duration of parent-child interactive reading, coding of transcripts for reading quality, children's pre-post PPVT-R performance, consumer satisfaction questionnaires, and assessment of treatment integrity. During treatment, five of six subjects improved in reading regularity and duration. Likewise, all subjects demonstrated improvements in the quality of interactive book reading with their children. Children's PPVT-R performance also increased upon post-testing. Consumer satisfaction and treatment integrity were favorable. Study strengths and limitations, implications for school psychological practice, and future research questions are addressed.

Treatment integrity in a home-based pre-reading intervention programme
van Otterloo, SG (van Otterloo, Sandra G.); van der Leij, A (van der Leij, Aryan); Veldkamp, E (Veldkamp, Esther)
DYSLEXIA Volume: 12 Issue: 3 Pages: 155-176 DOI: 10.1002/dys.311 Published: AUG 2006
Treatment integrity is an underexposed issue in the phonological awareness intervention research. The current study assessed the integrity of treatment of the families (N = 32) participating in the experimental condition of a home-based pre-reading intervention study. The participating kindergartners were all genetically at risk for developing dyslexia. Two aspects of treatment integrity, the number of lessons completed (quantity) and the quality of the administration of the programme (observed in a videotaped session), were investigated. The level of treatment integrity turned out to be 66% when completion of all lessons was taken as quantitative criterion, and about 74% when quality of the parent-child interaction was assessed. The two measures could predict the pre-reading skills at the end of kindergarten. Together they accounted for 43% of the variance in this dependent variable. Together with pre-reading scores at the pre-test the total predicted variance was 87%. The number of lessons completed still contributed 12% to the prediction after controlling for pre-test scores. The results indicated that treatment integrity indeed appears to be an important aspect of treatment outcome and should therefore be included in intervention studies.)

Ecological influences of the home and the child-care center on preschool-nore children's literacy development

Weigel, DJ (Weigel, DJ); Martin, SS (Martin, SS); Bennett, KK (Bennett, KK)

Based on ecological theory, this study examined how four components of children's home and child-care literacy environments, and the connections between these environments, were associated with preschool-age children's literacy and language development. Interview and standardized assessment data were collected from 85 preschool-age children, their parents, and child-care teachers. Findings from correlation and hierarchical multiple regression analyses revealed that (a) the literacy environments in a home and in a child-care center were associated with children's literacy and language development in varied and multifaceted ways, (b) aspects of home and child-care literacy environments combined to support children's skills, and (c) some of these associations remained after one year. The findings have implications for how researchers conceptualize the contexts in which preschool-age children's literacy and language development occurs and how they study connections among those contexts.

Volunteers

Volunteer support in the primary classroom: the long-term impact of one initiative upon children's reading performance
Elliott, J (Elliott, J); Arthurs, J (Arthurs, J); Williams, R (Williams, R)
BRITISH EDUCATIONAL RESEARCH JOURNAL Volume: 26   Issue: 2   Pages: 227-244
  DOI: 10.1080/01411920050000962   Published: APR 2000
This article reports atl evaluation of the effectiveness of a volunteer tutor reading intervention. Volunteers were provided with instruction and supervision in order that they might assist class teachers in the reaching of reading. A strong emphasis upon phonological awareness and storytelling underpinned the programme. Intervention took place in reception classes in three socially disadvantaged schools that could provide parallel classes to serve as controls. Assessment immediately after the intervention, and 3 years Inter, indicated that children receiving the volunteer intervention failed to make greater progress than same-school controls. The article considers a number of possible reasons for the apparent failure of the intervention and concludes by cautioning against simplistic expectations that additional adult support should necessarily lead to gains in children's learning.

Do volunteers in schools help children learn to read? A systematic review of randomised controlled trials
Torgerson, CJ (Torgerson, CJ); King, SE (King, SE); Sowden, AJ (Sowden, AJ)
EDUCATIONAL STUDIES Volume: 28   Issue: 4   Pages: 433-444   DOI: 10.1080/0305569022000042435   Published: DEC 2002
The aim of unpaid volunteer classroom assistants is to give extra support to children learning to read. The impact of using volunteers to improve children's acquisition of reading skills is unknown. To assess whether volunteers are effective in improving children's reading, we undertook a systematic review of all relevant randomised controlled trials (RCTs). An exhaustive search of all the main electronic databases was carried out (i.e. BEI, PsycInfo, ASSIA, PAIS, SSCI, ERIC, SPECTR, SIGLE). We identified eight experimental studies, of which seven were RCTs. One of the RCTs was excluded because it did not meet the inclusion criteria. One RCT randomised intact classes and the other six studies randomised individual children and could therefore be included in a meta-analysis. All of the trials were fairly small, with the largest including 99 pupils. Four of the trials showed a positive outcome, while three showed a negative effect and the remaining study was equivocal. We pooled the four most homogeneous trials. The pooled data indicated an effect size of 0.19, which was not statistically significant (p = 0.54, 95% confidence interval = -0.31 to 0.68). Overall, volunteering appeared to have a small effect on reading outcomes. However, the confidence intervals were wide, which could conceal a potentially large benefit or a harmful effect. Thus, more good quality RCTs are required in order to provide more conclusive evidence.

The effectiveness of one-to-one tutoring by community tutors for at-risk beginning readers
Vadasy, PF (Vadasy, PF); Jenkins, JR (Jenkins, JR); Antil, LR (Antil, LR); Wayne, SK (Wayne, SK); OConnor, RE (OConnor, RE)
LEARNING DISABILITY QUARTERLY Volume: 20   Issue: 2   Pages: 126-139   DOI: 10.2307/1511219   Published: SPR 1997
One-to-one instruction, while highly desirable for children with the lowest reading skills, is not often available, It could be provided by nonprofessional tutors in the community, however, One aim of this study was to determine whether a one-to-one phonologically based tutoring program that incorporates many features of successful early reading programs and that is delivered by nonprofessional tutors is effective with first-grade students at risk for reading failure, Forty at-risk first graders who did not differ on reading skill prior to the intervention were randomly assigned to one of two groups, The treatment group received 30 minutes of

individual instruction from community tutors four days a week for up to 23 weeks, The control group received only the regular reading instruction in their classrooms, The treatment group outperformed the control group on all reading, decoding, spelling and segmenting, and writing measures, with effect sizes averaging .21, .35, .37, and .19, respectively, Differences were significant on only one nonword reading and one spelling measure; however, a second aim was to determine the effects of the tutors' ability to implement the lessons scripted for them, Tutors who implemented the program with a high degree of fidelity achieved significant effect sizes in each early reading skill area assessed, Results support the potential of nonprofessional tutors to supplement early reading instruction, and prevent learning disabilities in at-risk children.

Paraprofessionals

Abstract:
In many schools in Australia students often begin their primary years with limited preparation for reading. "All hands on deck" are required to ensure the best possible student success rate for learning to read. In this project, Education Assistants, often under-utilised in schools, were used to implement a reading intervention to struggling readers in years one to three. Education Assistants were trained to withdraw students in small groups and engage students in an explicit, systematic early reading program. The intervention was implemented in a cognitively and emotionally supportive manner and the Education Assistants were trained using autonomy support, collaboration and reflection. Results showed encouraging growth in reading skills for all student age groups compared to the rest of the class. The Education Assistants responded well to the initial and ongoing training processes, refining their teaching skills and the intervention over the period.

The impact of early reading interventions delivered by classroom assistants on attainment at the end of Year 2
Savage, R (Savage, Robert)[1]; [Carless, S](#) (Carless, Sue)[2]
BRITISH EDUCATIONAL RESEARCH JOURNAL Volume: 34 Issue: 3 Pages: 363-385 DOI: 10.1080/01411920701609315 Published: 2008
Previous research has shown that training teaching assistants to deliver early phonic reading interventions can have measurable effects at immediate post-test. This study explored whether the effects of interventions delivered by classroom assistants (CAs) were still evident at the end of the first phase of schooling, 16 months after the early intervention finished. Children were divided into 'treatment responder' and 'treatment non-responder' groups based upon post-test decoding skills. The treatment responder group was significantly more likely to achieve average results in nationally administered tests (end of Key Stage 1 tests) and teacher ratings of attainment than the treatment non-responders. Treatment responders were indistinguishable from national averages on the mathematics test, writing test and reading task performance, but differed on reading comprehension test and on teacher-assessed attainment. Gains in reading delivered following early phonic reading interventions delivered by CAs are maintained for many children. Non-responders and treatment responders with only modest decoding skill may require additional support to achieve national targets in literacy.

Reducing Reading Failure for Kindergarten Urban Students: A Study of Early Literacy Instruction, Treatment Quality, and Treatment Duration
Yurick, A (Yurick, Amanda)[1,2]; Cartledge, G (Cartledge, Gwendolyn)[2]; Kourea, L (Kourea, Lefki)[3,4]; Keyes, S (Keyes, Starr)[2]
REMEDIAL AND SPECIAL EDUCATION Volume: 33 Issue: 2 Pages: 89-102 DOI: 10.1177/0741932510365359 Published: MAR-APR 2012
Six instructional assistants taught the Early Reading Intervention (ERI) curriculum to 38 at-risk kindergarten students, and 32 nonrisk students served as comparisons. Student risk

was determined based on performance on the Dynamic Indicators of Basic Early Literacy Skills subtests of Nonsense Word Fluency, Letter Naming Fluency, and Phoneme Segmentation Fluency (PSF). The Word Attack (WA) and Letter-Word Identification (LWID) subtests of the Woodcock-Johnson III Tests of Achievement were used to confirm risk status and also as pre- and posttest measures. Treatment students received between 6.85 and 13.70 hr of instruction, with varying degrees of treatment quality. Multiple linear regression was used to analyze the amount of variance in gain scores that could be explained by participation in ERI, treatment quality, and treatment duration. Results showed WA and LWID gains with large effect sizes for treatment students. Findings for treatment quality and duration were mixed, without clear indications of their effects on gain scores.

Assessment Data-Informed Guidance To Individualize Kindergarten Reading Instruction: Findings from a Cluster-Randomized Control Field Trial
Al Otaiba, S (Al Otaiba, Stephanie)[1]; Connor, CM (Connor, Carol M.)[1]; Folsom, JS (Folsom, Jessica S.)[1]; Greulich, L (Greulich, Luana)[1]; Meadows, J (Meadows, Jane)[1]; Li, Z (Li, Zhi)[2]
ELEMENTARY SCHOOL JOURNAL Volume: 111   Issue: 4   Special Issue: SI   Pages: 535-560   Published: JUN 2011
The purpose of this cluster-randomized control field trial was to examine whether kindergarten teachers could learn to differentiate classroom reading instruction using Individualized Student Instruction for Kindergarten (ISI-K) and to test the efficacy of differentiation on reading outcomes. The study involved 14 schools, 23 ISI-K (n = 305 students) and 21 contrast teachers (n = 251 students). Data sources included classroom observations, parent surveys, and student assessments of language, cognitive, and reading skills. Hierarchical multivariate linear modeling revealed that students in ISI-K classrooms outperformed contrast students on a latent measure of reading skills (ES = .52). Teachers in both conditions provided small-group instruction, but teachers in the ISI-K condition provided significantly more individualized instruction. Findings are discussed regarding professional development to differentiate core reading instruction and the challenge of using Response to Intervention approaches to address students' needs in the areas of reading.

Teachers' Judgments Of Students' Early Literacy Skills Measured By The Early Literacy Skills Assessment: Comparisons Of Teachers With And Without Assessment Administration Experience
Begeny, JC (Begeny, John C.)[1]; Buchanan, H (Buchanan, Heather)[2]
PSYCHOLOGY IN THE SCHOOLS Volume: 47   Issue: 8   Pages: 859-868   DOI: 10.1002/pits.20509   Published: SEP 2010
Teacher judgments about students' academic abilities are important for several reasons, including their day-to-day instructional decision making. Not surprisingly, previous studies have investigated the accuracy of teachers' judgments about their students' reading abilities. Previous research, however, has not investigated teachers' judgments about students' early literacy skills, nor has previous research systematically examined how teachers' training and use of an objective assessment instrument impact their judgments of students' performance on that instrument. This exploratory study offers the first investigation of teachers' judgment accuracy of pre-kindergarten students' early literacy skills, and compares the judgment accuracy of teachers with and without opportunities to administer the Early Literacy Skills Assessment (ELSA). Findings suggest that teachers with opportunities to administer the ELSA had a significantly higher percentage of accurate judgments across half of the ELSA subtests, but their judgment accuracy was still no better than 50%-60% on all but one ELSA subtest. Implications for school psycholoeist practitioners and researchers are presented.

Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades
Brabham, EG (Brabham, EG); Lynch-Brown, C (Lynch-Brown, C)
JOURNAL OF EDUCATIONAL PSYCHOLOGY Volume: 94   Issue: 3   Pages: 465-473   DOI: 10.1037//0022-0663.94.3.465   Published: SEP 2002
Effects of just reading, performance reading, and interactional reading-aloud styles on learning were assessed for 117 1st graders and 129 3rd graders. Preservice teachers, trained and guided by scripted procedures, read 2 informational storybooks to students using 1 of the styles. Multivariate analyses of variance and univariate tests showed that reading-aloud styles produced statistically significant effects on vocabulary acquisition and comprehension and similar results at each grade level. Differences in comprehension means for reading style treatments were statistically significant for I book only. Vocabulary

acquisition was facilitated more by interactional reading than performance reading. Both verbally mediated styles resulted in greater vocabulary learning than just reading. Results extend previous findings on reading-aloud styles and are congruent with sociolinguistic and transactional theories.

First grade teachers' knowledge of phonological awareness and code concepts: Examining gains from an intensive form of professional development and corresponding teacher attitudes

Brady, S (Brady, Susan)2,1; Gillis, M (Gillis, Margie)2; Smith, T (Smith, Tara)1; Lavalette, M (Lavalette, MaryEllen)2; Liss-Bronstein, L (Liss-Bronstein, Linda)2; Lowe, E (Lowe, Evelyn)2; North, W (North, Wendy)2; Russo, E (Russo, Evelyn)2; Wilder, TD (Wilder, T. Diane)2

The study examined the efficacy of an intensive form of professional development (PD) for building the knowledge of first-grade teachers in the areas of phonological awareness and phonics. The PD featured frequent in-class support from highly knowledgeable mentors for one school year, in addition to an introductory two-day summer institute and monthly workshops. Pre- and post-assessment of participants on a Teacher Knowledge Survey (TKS) indicated weak knowledge of phonological awareness and phonics concepts prior to PD and large, significant gains in each area by year-end. In addition, to investigate factors potentially associated with teachers' responses to training, a Teacher Attitude Survey (TAS) was administered before and after the PD. The TAS measured teachers' attitudes regarding PD, external and internal motivation to participate, intentions to actively engage in learning and implementing new instructional methods, sense of self-efficacy as reading instructors, and premises about reading instruction (e.g., about whole language). Attitudes on a subset of these factors, teachers' initial knowledge scores on the TKS, and years of teaching experience (estimated by age) accounted for significant portions of the variance in performance on the TKS after training.

The print environment in kindergartens: A study of conventional and holistic teachers and their classrooms in three settings

Dowhower, SL (Dowhower, SL); Beagle, KG (Beagle, KG)

Recommendations that teachers provide a print-rich environment in the classroom are ubiquitous in the emergent reading literature. This study assessed the physical print environment of 18 kindergarten classrooms, addressing the extent to which the teachers honored literacy by providing materials and special places for reading and writing to develop. Four categories were used for analysis: books, writing supplies, literacy centers, and incidences of print subcategorized as student, teacher and commercially produced. Both suburban and holistic classrooms had significantly more writing tools and student/teacher generated print than rural, urban and conventional settings. Urban and conventionally taught children saw more commercial print and had fewer literacy centers. Several conclusions seem justified: (a) because of the overall print-poor environment found in most of the: classrooms, teachers are missing the opportunity to honor and cultivate literacy to its fullest potential; (b) where a child goes to school and the philosophy of the teacher may affect children's access to special literacy areas, the amount and type of print displayed, as well as the opportunity students have to create their own print around the room; and (c) early childhood inservice and preservice teachers (no matter their theoretical perspective) need explicit guidelines in how to establish a deliberate, well-planned print-rich environment.

Increasing the use of evidence-based strategies by special education teachers: A collaborative approach

Duchnowski, AJ (Duchnowski, Albert J.); Kutash, K (Kutash, Krista); Sheffield, S (Sheffield, Susan); Vaughn, B (Vaughn, Bobbie)
This article describes a process developed to increase the use of evidence-based instructional strategies by teachers of students in special education programs in a middle school and high school. The project developed a working partnership between university researchers and parents, teachers and administrators of students in special education programs. The partnership produced manuals for the teachers that outlined effective strategies for teaching reading, encouraging family involvement, providing academic feedback, and engaging in positive behavior support in the classroom. The results of assessing implementation fidelity, implications of the study, and future research issues are presented.

Learning to teach struggling (and non-struggling) elementary school readers: An analysis of preservice teachers' knowledges
Duffy, AM (Duffy, AM); Atkinson, TS (Atkinson, TS)
The purpose of this research was to describe elementary school preservice teachers' beliefs, understandings, and instruction of struggling and non-struggling readers as they evolved over time in two university reading education courses with a field component. Using a qualitative content analysis, we analyzed the assignments of 22 preservice teachers across one year of their teacher education program. We found that, throughout the year, preservice teachers improved in their abilities to integrate their personal, practical, and professional knowledges to inform their reading instruction. Their misunderstandings surrounding reading instruction decreased while their abilities to examine reading instruction critically and estimations of their preparedness to teach struggling readers increased. Preservice teachers' views about the value of assessing students' reading proficiency became increasingly more positive as did perceptions about the importance of tutoring straggling readers. Finally, implications are made to suggest how university reading education courses may support the learning and development of future preservice teachers.

Effects of different teaching methods on phonological awareness and on literacy skills in first grade
Einsiedler, W (Einsiedler, W); Frank, A (Frank, A); Kirschhock, EM (Kirschhock, EM); Martschinke, S (Martschinke, S); Treinies, G (Treinies, G)
Different methods of elementary literacy instruction were studied in their effects on phonological awareness and on reading and spelling during first grade. Five classes received a phonological awareness training, five classes implemented an open concept of learning to read and to write, and five classes were taught in the traditional way with a primer. Phonological awareness was assessed at the beginning of the school year (t(1), N = 375), and at mid-term (t(2), N = 364). At the end of the school year (t(3), N = 351), standardized reading and spelling tests were used. Phonological awareness training appeared to favor low-achieving children. As an effect on reading and spelling outcomes at the end of the first grade a main effect yielded in favor of the training classes.

Foorman, B.R.a , York, M.b , Santi, K.L.c , Francis, D.b
Contextual effects on predicting risk for reading difficulties in first and second grade

Florida Center for Reading Research, Florida State University, 227 N. Bronough St., Tallahassee, FL 32301, United States; Texas Institute for Measurement, Evaluation, and Statistics, University of Houston, Houston, United States; Santi Group, LLC, Houston, United States

This study utilized early reading assessment data from a randomized trial of 210 urban and rural schools in Texas to examine contextual effects on risk prediction in first and second grade. The primary objective was to examine the roles of (a) individual differences, (b) the grade 1 classroom, and (c) the pairing of first and second grade teachers in determining grade 2 outcomes in word reading and fluency. A second objective was to investigate whether the administration format of the assessment (paper, paper plus desktop, handheld plus desktop) or the level of teacher support (web mentoring, no mentoring) moderated the prediction. These moderator variables proved not to be significant. Subsequent analyses found that a combination of student pretest and mean of pretest classroom was a better predictor than student pretest alone. Additionally, the effect of student scores varied by teacher-pair. On average, intraclass correlations (ICCs) ranged from 6% to 17%. Differences in ICCs at the classroom level were much greater than at the school level, and differences in urban schools were twice that of rural schools.

Exploring the role of teacher quality in predicting reading outcomes for first-grade English learners - An observational study

Gersten, R (Gersten, R); Baker, SK (Baker, SK); Haager, D (Haager, D); Graves, AW (Graves, AW)

The first portion of this article describes the development and validation of a classroom observation measure. The goal of the measure was to assess the quality of reading instruction provided to first-grade English learners, We report the internal consistency reliability, interrater reliability, the development of empirically derived subscales, and the criterion-related validity of the subscales. The latter was moderately high for three of the six subscales (range = .62-.65) and moderate for the three others (range = .49-.57). The second portion of this article includes a contrasted groups analysis of the four classes with the lowest and highest growth in reading. We conclude with a presentation of the major themes and issues that emerged in the qualitative field notes.

Gillentine, J.
Understanding early literacy development: The impact of narrative and reflection as tools within a collaborative professional development setting

Rev. Benjamin Parker School, Kane'ohe, HI, United States

The purpose of this qualitative study was to examine the impact upon a group of ten early childhood inservice educators of a collaborative professional development course in early literacy development presented using the tools of narrative and reflection. The study considered impact in terms of teachers' beliefs, values, practice, and sense of professionalism. A constructivist framework for designing and conducting the course allowed teachers, regardless of former training and experience, to participate in and contribute to the course. Data were drawn from teacher writings and included reflections, responses to readings, and narrative descriptions of lessons taught. These were analyzed to identify themes concerning the impact of the course. Analysis of the data revealed three primary themes: 1) impact on teacher beliefs; 2) impact on teaching practice; and 3) impact on teachers' understanding of professionalism. Teacher feelings revealed beliefs, validation, values, and growth within a learning community. Teacher practice demonstrated how the learning environment, the social climate, assessment practices, and pedagogy supported

early literacy development. The teachers' reflections on their sense of professionalism described growth, change, and meeting external expectations of the literacy development of students. The study confirmed that reflection and narrative are useful tools for improving teaching. Dialogue among participants allowed them to share teaching knowledge. The collaborative learning community established a group identity within the course and validated participants as experts within the context of their own teaching. Future research should consider narrative and reflection in collaborative professional development settings for other audiences and other areas of learning.

The Impact of Professional Development on Kindergarten and First Grade Reading Achievement
Hineman, Patricia
2009
Due to the increased demands for accountability with the passage of the No Child Left Behind legislation signed in 2002 by President Bush, schools are required to use reading strategies and programs that are supported by scientific research. In Arizona state statute, ARS 15-704, the law outlines the requirements for Arizona school districts to follow when teaching kindergarten through third graders to read. Some of these requirements include adopting a reading curriculum that incorporates the five essential components of reading (phonemic awareness, phonics, vocabulary, fluency, and comprehension), the use of an assessment system to screen and monitor students, and on-going teacher training focused on scientifically based reading research (SBRR). This study examined the differences in kindergarten and first grade students' reading achievement on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), assessments that measure early literacy skills, in schools where teachers were provided forty hours of scientifically based reading research (SBRR) professional development with follow-up literacy coach support and in schools where teachers were not provided this training. Schools in Pinewood School District, a fictitious school district name, chose to attend training; however, all kindergarten and first grade staff and building administrator had to commit to attending as a group.
A review of the literature included information about teacher professional development, reading instruction, and DIBELS. Professional development is defined and a brief history of professional development is discussed. Traditional professional development is contrasted with best practices in teacher professional development. The next section describes the historical background of reading instruction in the United States. This section ends with a history and description of DIBELS. Six of nineteen schools in the Pinewood School District were included in the sample. Teachers in three schools participated in the forty-hour training and teachers in the other three schools did not participate in training. The sample included 523 kindergarteners and 517 first graders. To analyze pre- and post-assessment data for DIBELS measures PSF (K and 1), NWF (K and 1), and ORF (1) for December 2008 and May 2009, several ANCOVAs were used. Data were disaggregated by cluster, gender, ethnicity, and poverty levels for each grade level and DIBELS measure. The factor was teacher training, the dependent variable was DIBELS post-test scores, and the covariate was DIBELS pre-test scores. The analyses showed mixed results. For some disaggregated groups, there was a significant relationship between teacher training and DIBELS post-test results. A chi-square analysis was used to evaluate the relationship between tea
cher training and students' DIBELS instructional support recommendations in May 2009. There were significant results on this analysis. Results of all analyses were reported. The study concludes with a summary of all chapters and findings, conclusions based on the findings, and recommendations for practice and future research possibilities. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

The impact of HeadsUp! Reading on early childhood educators' literacy practices and preschool children's literacy skills

Jackson, B (Jackson, B); Larzelere, R (Larzelere, R); Clair, LS (Clair, LS); Corr, M (Corr, M); Fichter, C (Fichter, C); Egertson, H (Egertson, H)

This study evaluated the effects of HeadsUp! Reading (HUR), a professional development literacy workshop series, with and without supplementary mentoring on early childhood educators' (ECEs) practices and its subsequent effect on preschool children's literacy skills. ECEs who served children in high poverty communities participated in a 15-week satellite broadcast training series. Pre- and post-assessments were completed for both the control and intervention groups. Prticipants in HUR and HUR + mentoring significantly exceeded the control ECEs on the quality of their classroom environments. Children's literacy skills improved more in the HUR classrooms than in control classrooms. Mentoring did not enhance preschool children's literacy skills more than HUR alone. The treatment was equally effective for Spanish- and English-speaking children. Early childhood educator participation in HeadsUp! Reading can enhance the effectiveness of classroom literacy practices and has subsequent benefits on language and literacy skills of preschool children from poverty backgrounds. These findings further support the crucial role of high quality programs for the development of children's literacy skills.

Increasing the Authentic Reading Experiences of Kindergarten Students through a Teacher In-service Program.

Kirby, Maxine R.

1992

A practicum was designed to assist 30 kindergarten teachers in increasing the authentic reading experiences of kindergarten students in their classrooms. The goal of the practicum was two-fold: to provide the teachers with alternative instructional strategies to drill and practice basic reading skills; and to provide adequate, developmentally appropriate reading materials for the students in the target teachers' classrooms. Survey results, classroom observations, and a review of pertinent literature were used to plan a 19-hour in-service program which was carried out over the school year. Data gathering methods were a student interest and attitude survey, questionnaires, checklists, professional literature, and videotapes on reading strategies. An analysis of the data revealed that the teachers used the knowledge that they gained to select quality children's books and to increase the authentic reading experiences of their students. At the same time, the teachers decreased their use of drill and practice of isolated skills. Monthly sharing sessions, professional literature, funds to purchase children's trade books, classroom observations, and a guest lecturer were rated by the teachers as beneficial aspects of the in-service.

(The school system's organizational chart, and eight tables and one figure of data are included; 77 references, the primary classroom literacy assessment inventory, forms for classroom use from the inservice training, and literature recommendations for kindergarten are attached.)

Kragler, S.a , Martin, L.b

Learning to Read in First Grade: Developing Effective Programs in Urban Schools

(2012) Educational Forum, 76 (2), pp. 248-258.

http://www.scopus.com/inward/record.url?eid=2-s2.0-84859599193&partnerID=40&md5=5d445f1b1fb60e3f44d8d4fa245d2458

Childhood Education and Literacy Studies, University of South Florida Polytechnic, 3433 Winter Lake Rd., Lakeland, FL 33803, United States;

Elementary Education, Ball State University, Muncie, IN, United States

This article describes the reading instructional program that first-graders in an urban school located in a large, Midwestern city received as a result of a grant initiative. Various

assessments of the children's reading revealed some important areas for reading success were missing. As a result, suggestions were shared with the school staff to balance the first-grade reading curriculum. However, one confounding variable prevented the teachers' ability to change their instruction.

Promoting the development of preschool children's emergent literacy skills: a randomized evaluation of a literacy-focused curriculum and two professional development models
Lonigan, CJ (Lonigan, Christopher J.)[1,3]; Farver, JM (Farver, JoAnn M.)[2]; Phillips, BM (Phillips, Beth M.)[3]; Clancy-Menchetti, J (Clancy-Menchetti, Jeanine)[3]
To date, there have been few causally interpretable evaluations of the impacts of preschool curricula on the skills of children at-risk for academic difficulties, and even fewer studies have demonstrated statistically significant or educationally meaningful effects. In this cluster-randomized study, we evaluated the impacts of a literacy-focused preschool curriculum and two types of professional development on the emergent literacy skills of preschool children at-risk for educational difficulties. Forty-eight preschools were randomly assigned to a business-as-usual control, a literacy-focused curriculum with workshop-only professional development, or a literacy-focused curriculum with workshop plus in-class mentoring professional development conditions. An ethnically diverse group of 739 preschool children was assessed on language and literacy outcomes. Results revealed significant and moderate effects for the curriculum and small, mostly nonsignificant, effects of professional development across child outcomes and classroom measures.

Beginning literacy: Links among teacher knowledge, teacher practice, and student learning
McCutchen, D (McCutchen, D); Abbott, RD (Abbott, RD); Green, LB (Green, LB); Beretvas, SN (Beretvas, SN); Cox, S (Cox, S); Potter, NS (Potter, NS); Quiroga, T (Quiroga, T); Gray, AL (Gray, AL)
Although the importance of phonological awareness has been discussed widely in the research literature, the concept is not well understood by many classroom teachers. In the study described here, we worked with groups of kindergarten and first-grade teachers (the experimental group) during a 2-week summer institute and throughout the school year. We shared with them research about learning disabilities and effective instruction, stressing the importance of explicit instruction in phonological and orthographic awareness. We followed the experimental group and a control group into their classrooms for a year, assessing teachers' classroom practices and their students' (n = 779) learning. The study yielded three major findings: We can deepen teachers' own knowledge of the role of phonological and orthographic information in literacy instruction; teachers can use that knowledge to change classroom practice; and changes in teacher knowledge and classroom practice can improve student learning.

Relationships between kindergarten teachers' perceptions of literacy acquisition and children's literacy involvement and classroom materials
McMahon, R (McMahon, R); Richmond, MG (Richmond, MG); Reeves-Kazelskis, C (Reeves-Kazelskis, C)
Relationships between teachers' perceptions of literacy acquisition and (a) children's involvement in literacy events and (b) the quantity and quality of classroom literacy materials were examined. The participants were 12 kindergarten teachers and 16 randomly selected students from each teacher's classroom. For data analysis purposes, responses on the Literacy Acquisition Perception Profile, verified through teacher interviews, were used to

label teachers' perceptions as representing either a reading readiness skills or emergent literacy perspective. Children's voluntary involvement in literacy events was observed and recorded during a 12-week period. The Inventory of Literacy Indicators was used to assess the quantity and quality of classroom literacy materials. Children in classrooms of emergent literacy teachers participated in a higher number and greater variety of literacy events than did children in reading readiness skills classrooms, and literacy materials in classrooms of emergent literacy teachers were higher in both quantity and quality than were literacy materials in reading readiness skills classrooms.

Understandings, beliefs, and reported decision making of first-year teachers from different reading teacher preparation programs

Maloch, B (Maloch, B); Flint, AS (Flint, AS); Eldridge, D (Eldridge, D); Harmon, J (Harmon, J); Loven, R (Loven, R); Fine, JC (Fine, JC); Bryant-Shanklin, M (Bryant-Shanklin, M); Martinez, M (Martinez, M)

In this study we followed 101 preservice teachers through their first year of teaching in order to explore differences in the understandings, beliefs, and decision making of beginning teachers from 3 types of reading teacher preparation programs. 73 of the elementary teachers graduated from programs at 1 of 8 colleges or universities identified by the International Reading Association's National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction as excellent in undergraduate reading teacher preparation. 3 of these recognized programs were reading specialization programs (i.e., a major or minor in reading) housed at universities that also offered a general education program; the remaining 5 featured concentrated experiences and courses in reading that all undergraduates enjoyed. The reported experiences of these 40 reading specialization program teachers and 33 graduates of reading embedded programs were compared with the experiences of 28 graduates from general education programs from the 3 sites that offered a general program. Structured telephone interviews were conducted at 3 points in the beginning teachers' first year of teaching (September, January, June). Inductive data-driven analyses yielded 3 themes-instructional decision making, negotiations, and community-that distinguished the responses of graduates of the IRA recognized programs from those of graduates of general education programs. Graduates of recognized programs tended to speak in clear and thoughtful ways about their instruction, focus on assessing and meeting students' needs, and were more likely to report seeking ongoing support for and development of their own learning. These findings were robust for graduates across the 3 reading specialization sites as well as the 5 other recognized programs, suggesting that the overall quality and features of a program rather than its type or label can make a difference in preservice teacher learning.

The relation of global first-grade classroom environment to structural classroom features and teacher and student behaviors

Natl Inst Child Hlth Human Dev Ear

We observed 827 first-grade classrooms in 747 schools in 32 states in order to describe classroom activities and child-teacher interactions, dimensions of the global classroom environment, and their relations to structural aspects of the classroom and to child behaviors. Classrooms were observed for approximately 3 hours starting at the beginning of the school day with an intention of observing during academic instruction, particularly in reading. Time-samplings of activities, teacher behaviors, and child behaviors as well as global ratings of teacher-child interactions and the classroom environment were obtained. The most frequently observed forms of activity were structured teacher-directed activity and whole-class instruction. As expected, the largest portion of time was allocated to literacy-

related activities. There was wide variation in the frequency of most activities across classrooms. Global ratings also demonstrated significant variability across classrooms and were described by 2 dimensions: instructional support for learning and emotional support. Neither dimension was related to class size or child-adult ratio, Classrooms were observed to provide more emotional support when there were more adults present. Students' engagement in academic activities and positive behaviors with peers were higher, and negative behaviors with peers and teachers were lower, when classrooms provided more instructional and emotional support. Teachers' total years of experience were unrelated to ratings of support in the classroom. Years of experience teaching first grade did predict more time devoted to academic activities, albeit to a modest degree. Teachers with more post-high school education provided more emotional support and devoted more time to academic activities. Taken together, these findings demonstrated that first grade is a highly variable experience for children in the United States and that attempts to assess and improve child readiness should recognize this.

A survey of training, practice, and competence in reading assessment and intervention
Nelson, JM (Nelson, Jason M.)[1]; Machek, GR (Machek, Greg R.)[1]
SCHOOL PSYCHOLOGY REVIEW Volume: 36   Issue: 2   Pages: 311-327   Published: 2007
Data were gathered from 496 practicing school psychologists regarding perceptions of their preparation, ability, and use of research-based techniques in reading assessment and intervention. The survey consisted mainly of items from a survey by Fish and Margolis (1988), but items were added based on research advances in the field. Nearly half of those surveyed were not required to take a class specific to reading. Despite a desire to be more involved in early reading intervention, self-reported knowledge of evidence-based reading interventions was low. A considerable portion of participants also reported low knowledge and use of research-based reading assessment techniques. Over 90% reported that more training in reading assessment and intervention would be beneficial for them as practitioners. Results are discussed relative to historical roles, current service delivery reformulations, and the school psychologist's role in future professional activities, particularly within a response to intervention model.

Kindergarten teachers adjust their teaching practices in accordance with children's academic pre-skills
Pakarinen, Eija[1]; Lerkkanen, Marja-Kristiina[2]; Poikkeus, Anna-Maija[2]; Siekkinen, Martti[3]; Nurmi, Jari-Erik[1]
Educational Psychology, Volume 31, Number 1, January 2011 , pp. 37-53(17)
This study examined the extent to which kindergarten children's academic pre-skills are associated with their teachers' subsequent teaching practices. The pre-skills in reading and math of 1268 children (655 boys, 613 girls) were measured in kindergarten in the fall. A pair of trained observers used the Classroom Assessment Scoring System instrument to observe 49 kindergarten teachers on their emotional support, classroom organisation and instructional support in kindergarten in the spring. The results of the multilevel modelling showed that low levels of academic pre-skills in kindergarten classrooms in the fall predicted high classroom quality in the classrooms later on. The results suggest that the overall level of children's academic pre-skills in the classroom plays an important role in the ways in which teachers adapt their instructional practices to the needs of a particular classroom.
Keywords: adaptive teaching; teaching practices; classroom observations; pre-reading skills; pre-math skills; kindergarten
DOI: http://dx.doi.org/10.1080/01443410.2010.517906

Just knowing how to read isn't enough! Assessing knowledge for teaching reading
Phelps, G (Phelps, Geoffrey)

Debates persist over the knowledge needed to teach elementary reading effectively. In one commonly held view verbal ability is what matters most and the best approach to improving teacher quality is to recruit teachers who themselves are good readers. Others argue that teachers need special forms of professional knowledge that differ substantially from common adult reading and verbal ability. These different assumptions about what teachers need to know are directly relevant to whether teaching reading demands specialized professional knowledge and they have lead to radically different policy recommendations for both teacher preparation and induction. This study presents preliminary evidence that elementary reading teachers can hold a special knowledge of language, text, and reading process that differs substantially from common reading and verbal ability. Implications for the measurement and study of teacher quality and related implications for teacher evaluation and teacher development are discussed.

Contexts of reading instruction: Implications for literacy skills and kindergarteners' behavioral engagement
Ponitz, CC (Ponitz, Claire Cameron)[1]; Rimm-Kaufman, SE (Rimm-Kaufman, Sara E.)
This observational study examined kindergarteners' (n = 170) exposure to literacy instruction in their classrooms (n = 36), child-by-instruction interactions, and behavioral engagement in relation to literacy skills. Time spent in four instructional contexts was coded according to who managed children's attention (teacher-managed, TM or child-managed, CM), and the content focus (basic skills such as teaching letters and their sounds, or meaning-focused such as discussing a book); children's behavioral engagement and off-task behavior were also coded live five times over the year. Word-reading and phonological awareness skills were assessed in fall and spring. Hierarchical Linear Modeling results indicated that kindergarteners with lower initial skills gained more in word-reading, but not phonological awareness, when they were exposed to relatively more time in TM basic skills instruction. In contrast, more time in CM meaning-focused instruction did not interact with initial skills to predict either outcome. Engagement analyses indicated that students were more likely to be off-task in CM than in TM contexts. Children who spent more time off-task during TM contexts had lower spring scores on both outcomes. Discussion explores the implications of this work for both literacy learning and behavioral engagement in the transition year of kindergarten.

Screening For Learning-Disabilities With Teacher Rating-Scales
SALVESEN, KA (SALVESEN, KA); UNDHEIM, JO (UNDHEIM, JO)
The purpose of the study was to investigate the use of teacher assessments in screening for learning disabilities. In a longitudinal study, 603 children were rated by their teachers in the second grade (age 8 to 9 years), and the ratings were correlated with examinations of reading, spelling, and intelligence in the third grade. The third-grade tests for reading, spelling, and intelligence classified children into groups with low achievement and dyslexia, and these two groups were compared with normally achieving children. The accuracy of teacher assessments, measured with correlation analysis, ROC curves, and kappa indices, showed that teachers were quite accurate in their judgment of low achievement, but somewhat less efficient in their judgment of specific reading difficulties.

Effective Reading Programs for the Elementary Grades: A Best-Evidence Synthesis
Slavin, RE (Slavin, Robert E.)[1,2]; Lake, C (Lake, Cynthia)[1]; Chambers, B (Chambers, Bette)[1,2]; Cheung, A (Cheung, Alan); Davis, S (Davis, Susan)

This article systematically reviews research on the achievement outcomes of four types of approaches to improving the reading success of children in the elementary grades: reading curricula, instructional technology, instructional process programs, and combinations of curricula and instructional process. Study inclusion criteria included use of randomized or matched control groups, a study duration of at least 12 weeks, valid achievement measures independent of the experimental treatments, and a final assessment at the end of Grade 1 or later A total of 63 beginning reading (starting in Grades K or 1) and 79 upper elementary (Grades 2 through 5) reading studies met these criteria. The review concludes that instructional process programs designed to change daily teaching practices have substantially greater research support than programs that focus on curriculum or technology alone.

Identification of children at risk of dyslexia: the validity of teacher judgements using 'Phonic Phases'
Snowling, MJ (Snowling, Margaret J.)[1]; Duff, F (Duff, Fiona)[1]; Petrou, A (Petrou, Alex)[2]; Schiffeldrin, J (Schiffeldrin, Josie)[2]; Bailey, AM (Bailey, Alison M.)
We report an investigation of the validity of teachers' ratings of children's progress in 'phonics' as a screener for dyslexia. Seventy-three 6-year-olds from a whole school population were identified as 'at risk' of dyslexia according to teacher judgements of slow progression through phonic phases. Six months later, children's attainments in literacy and phonological skills were compared with those of their typically developing peers matched on age and gender. Teacher assessments of risk were related to individual differences in performance on a standardised test of reading ability. Teacher assessments overestimated 'risk of dyslexia', defined as below-average reading performance. However, teacher judgements, supplemented by tests of phoneme awareness and rapid naming, allowed a sensitive and specific identification of children who subsequently experienced reading difficulties. These findings show teachers can identify risk of dyslexia; the accuracy of this process can be improved by administering two tests of phonological skills.

Preparing novice teachers to develop basic reading and spelling skills in children
Spear-Swerling, L (Spear-Swerling, L); Brucker, PO (Brucker, PO)
This study examined the word-structure knowledge of novice teachers and the progress of children tutored by a subgroup of the teachers. Teachers' word-structure knowledge was assessed using three tasks: graphophonemic segmentation, classification of pseudowords by syllable type, and classification of real words as phonetically regular or irregular. Tutored children were assessed on several measures of basic reading and spelling skills. Novice teachers who received word-structure instruction outperformed a comparison group of teachers in word-structure knowledge at post-test. Tutored children improved significantly from pre-test to post-test on all assessments. Teachers' post-test knowledge on the graphophonemic segmentation and irregular words tasks correlated significantly with tutored children's progress in decoding phonetically regular words; error analyses indicated links between teachers' patterns of word-structure knowledge and children's patterns of decoding progress. The study suggests that word-structure knowledge is important to effective teaching of word decoding and underscores the need to include this information in teacher preparation.

Teachers' knowledge base for implementing response-to-intervention models in reading
Spear-Swerling, L (Spear-Swerling, Louise)[1]; Cheesman, E (Cheesman, Elaine)[2]

This study examined the knowledge base of 142 elementary-level educators for implementing response-to-intervention (RTI) models in reading. A questionnaire assessed participants' professional background for teaching reading, as well as their familiarity with specific assessments, research-based instructional models, and interventions potentially useful in RTI approaches. A multiple-choice knowledge survey patterned after a teacher licensure exam, including items situated in classroom contexts, assessed participants' knowledge about different components of reading, assessment, and RTI practices. Overall, participants obtained the highest scores on a knowledge survey subscale involving fluency/vocabulary/comprehension and the lowest on a subscale involving assessment/RTI practices, with a subscale involving phonemic awareness/phonics in the middle. Mean percentages correct on the subscales ranged from about 58-65% correct. However, participants who said they had prior code-focused professional development outperformed other participants on all survey subscales. General elementary certified teachers performed comparably to special education certified teachers on two out of three subscales, with both groups outperforming unlicensed participants; on the assessment/RTI subscale, only the special educators outperformed unlicensed participants. Most participants were familiar with basic features of RTI such as the three tiered model but were unfamiliar with the research-based instructional approaches and interventions named in the study questionnaire, although participants who had experienced code-focused PD were significantly more likely to be familiar with certain interventions. The study suggests that professional development will be important to enable many educators to implement RTI effectively in reading.

Instructional Practices And Behavior During Reading: A Descriptive Summary And Comparison Of Practices In Title One And Non-Title Elementary Schools
Stichter, JR (Stichter, Janine R.); Stormont, M (Stormont, Melissa)[1]; Lewis, AJ (Lewis, Andtimothy J.)
Increasing achievement for all students is a focus of general and special education reform today. Especially in the area of reading, there are many children who are at risk for failure. The purpose of this study was to describe teachers' use of instructional time during literacy with students at schools with (Title One) and without (non-Title) high percentages of students in poverty. Teachers and students from 35 classrooms were each observed for approximately 5 hours, for a total of 175 observation hours. Teachers identified the time when they consistently taught literacy and were observed in 1-hour increments across 5 days. The Setting Factors Assessment Tool was used to measure the instructional context. teacher behavior, and student behavior. Main results from descriptive and statistical analyses indicate that teachers spent the majority of literacy time in whole group (40%) and independent work (32%). Only small percentages of instructional time were spent in peer work (8%), small-group work (8%). and transition (8%). When comparing Title One and non-Title classrooms, teachers in Title One classrooms used significantly more noninstructional related talk, had more instructional down time, and a higher number of student exits during instruction. A discussion of the limitations of this study and need for future research to extend these findings follows.

Taylor, B.M., Pearson, P.D., Clark, K., Walpole, S.
Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools
(2002) Elementary School Journal, 101 (2), pp. X-165.
http://www.scopus.com/inward/record.url?eid=2-s2.0-0039482682&partnerID=40&md5=7b0106f55f03f1888f6d853b491efde5
We investigated school and classroom factors related to primary-grade reading achievement

in schools with moderate to high numbers of students on subsidized lunch. 14 schools across the United States and 2 teachers in each of grades K-3 participated. 2 low and 2 average readers per class were tested individually in the fall and spring on measures of reading accuracy, fluency, and comprehension. The teachers were observed 5 times by trained observers between December and April during an hour of reading instruction, completed a written survey, completed a weekly log of reading/language arts activities in February and again in April, and were interviewed in May. Each school was identified as most, moderately, or least effective based on several measures of reading achievement in the primary grades. A combination of school and teacher factors, many of which were intertwined, was found to be important in the most effective schools. Statistically significant school factors included strong links to parents, systematic assessment of pupil progress, and strong building communication and collaboration. A collaborative model for the delivery of reading instruction, including early reading interventions, was a hallmark of the most effective schools. Statistically significant teacher factors included time spent in small-group instruction, time spent in independent reading, high levels of student on-task behavior, and strong home communication. More of the most accomplished teachers and teachers in the most effective schools supplemented explicit phonics instruction with coaching in which they taught students strategies for applying phonics to their everyday reading. Additionally, more of the most accomplished teachers and teachers in the most effective schools employed higher-level questions in discussions of text, and the most accomplished teachers were more likely to ask students to write in response to reading. In all of the most effective schools, reading was clearly a priority at both the school and classroom levels.

The utility of kindergarten teacher ratings for predicting low academic achievement in first grade

Teisl, JT (Teisl, JT); Mazzocco, MMM (Mazzocco, MMM); Myers, GF (Myers, GF)
The purpose this study was to assess the predictive value of kindergarten teachers' ratings of pupils for later first-grade academic achievement. Kindergarten students were rated by their teachers on a variety of variables, including math and reading performance, teacher concerns, and amount of learning relative to peers. These variables were then analyzed with respect to outcome measures for math and reading ability administered in the first grade. The teachers' ratings of academic performance were significantly correlated with scores on the outcome measures. Analyses were also carried out to determine sensitivity, specificity and predictive values of the different teacher ratings. The results indicated high overall accuracy, sensitivity, specificity, and negative predictive value for the ratings. Positive predictive value tended to be lower. A recommendation to follow from these results is that teacher ratings of this sort be used to determine which children should receive cognitive screening measures to further enhance identification of children at risk for learning disability. However, this recommendation is limited by the lack of empirically supported screening measures for math disability versus well-supported screening tools for reading disability.

The prevention of reading difficulties

Torgesen, JK (Torgesen, JK)
The purpose of this article is to provide practical advice about methods to prevent reading failure that is grounded in the new knowledge we have acquired about reading and learning to read over the past 2 decades. Recent research on reading is used to establish a set of facts about reading and reading growth that is relevant to establishing instructional objectives and methods for the prevention of reading difficulties. Within the context of our current understanding of the reasons many children find it difficult to learn to read, the article

also identifies the instructional conditions that need to be in place to prevent the development of reading difficulties in all but a very small proportion of children. The article concludes with a discussion of issues and procedures for the early identification of children who are likely to experience difficulties learning to read.

Results of Teaching Reading and Writing Strategies on Early Literacy of Children at-risk
Villalon, M (Villalon, Malva)[1]; Forster, CE (Foerster, Carla E.); Cox, P (Cox, Pilar); Rojas-Barahona, CA (Rojas-Barahona, Cristian A.)[1]; Valencia, E (Valencia, Edgar)[1]; Volante, P (Volante, Paulo)[1]

Introduction. There is substantial research literature emphasizing the positive impact of early literacy learning on school achievement, mainly in the case of children at-risk, but there aren't adequate conditions at school to develop them. Here we examine the effects of teaching reading and writing strategies on at-risk children's literacy learning (mean 5 years 3 months). Material and method: 339 at-risk Chilean children (132 in the intervention group and 207 in the comparison group) were assessed, at the beginning and the end of the school year. Teachers participated in a 1-year professional development intervention that included training and expert coaching. Results: Positive intervention effects were observed on children's knowledge of the alphabet, emergent writing and word identification. There was no effect on children's oral language outcomes. Discussion: The results were contrasted with other programs, showing the importance of training and coaching educators.

Improving Vocabulary and Pre-Literacy Skills of At-Risk Preschoolers Through Teacher Professional Development
Wasik, BA (Wasik, Barbara A.)[1]; Hindman, AH (Hindman, Annemarie H.)[1]

In a randomized control study, Head Start teachers were assigned to either an intervention group that received intensive, ongoing professional development (PD) or to a comparison group that received the "business as usual" PD provided by Head Start. The PD intervention provided teachers with conceptual knowledge and instructional strategies that support young children's development of vocabulary, alphabet knowledge, and phonological sensitivity. Results indicated that, after 1 academic year, teachers in the intervention group created higher quality classroom environments, as measured by the Early Language and Literacy Classroom Observation (M. W. Smith, D. K. Dickinson, A. Sangeorge, & L. Anastasopoulos, 2002) and Classroom Assessment Scoring System (R. C. Pianta, K. M. La Paro, & B. K. Hamre, 2007), and by videotapes of their classroom book readings. Further, children in the intervention group performed significantly better than comparison-group peers on measures of receptive vocabulary and phonological sensitivity but showed equivalent alphabet learning. Moreover, variation in classroom quality and fidelity to the intervention were linked to child outcomes, illuminating which particular aspects of teachers' improved practices were linked to children's gains. Findings provide new details about the mechanisms through which intensive and intentional PD can enhance Head Start teachers' classroom practices and, by extension, improve Head Start children's language and preliteracy outcomes.

Preschool teachers' literal and inferential questions and children's responses during whole-class shared reading
Zucker, TA (Zucker, Tricia A.)[1]; Justice, LM (Justice, Laura M.)[2]; Piasta, SB (Piasta, Shayne B.)[2]; Kaderavek, JN (Kaderavek, Joan N.)[3]

This study examined the extent to which preschool teachers used literal and inferential questions during classroom-based shared reading. Specific foci included (a) investigating the association among the level of literal or inferential language in the text, teachers' text-

related questions, and children's responses using sequential analysis, and (b) examining the relation between teachers' inferential questioning and children's vocabulary outcomes. Participants included 25 preschool teachers and 159 four-year-old children. Teachers video-taped their whole-class shared reading of an informational narrative text. Teachers and children's extratextual talk was analyzed and children completed standardized vocabulary assessments in fall and spring of the academic year. When reading this informational narrative text, teachers posed, on average, slightly more inferential questions than literal questions. Significant sequential associations were observed between the level of teachers' questions and child responses, with inferential questions consistently eliciting inferential child responses. Few characteristics of teachers' questions were associated with children's vocabulary outcomes. Results suggest that preschool teachers can use inferential questioning to encourage children to participate in conversation at complex, inferential levels; informational texts appear to provide a successful context for this inferential discourse. Implications for teachers and allied professionals are discussed.

Reading
(Read Aloud, Storybook, Dialogic Reading, Interactive Book Reading, Shared Reading, Print Reading, Fiction/Nonfiction, Narrative).

Implementing Guided Reading Strategies with Kindergarten and First Grade Students
Abbott, Lindsey Dornbush, Abby Giddings, Anne Thomas, Jennifer
2012
In the action research project report, the teacher researchers found that many kindergarten and first-grade students did not have the reading readiness skills to be reading at their benchmark target. The purpose of the project was to improve the students overall reading ability. The dates of the project began on September 8 through December 20, 2011. There were 74 students and 74 parents that participated in this research study. The teacher researchers noticed that the students lacked reading readiness skills that were necessary to meet grade level benchmarks. The teacher researchers used a parent survey, baseline assessments, and observational checklist to document evidence. The teacher researchers found from the parent survey that students who lacked interest in books and reading them demonstrated low reading readiness skills. The baseline assessment the students took showed an overall weakness in letter identification, initial sounds, medial sounds, and ending sounds. The observational checklist indicated difficulty with segmenting sounds, letter sound knowledge, inability to rhyme, decoding difficulties and reading miscues, poor comprehension, lack of interest in books, lack of print awareness skills, poor attentions spans, lack of response during whole group instruction, and off-task behaviors. The teacher researchers used a variety of interventions to improve their students overall reading skills. These interventions included small guided reading groups, word work, phonemic awareness drills, and posters that gave visual clues on how to decode unknown words. In the guided reading groups the students were paired with other students at their same reading ability. Flashcards were used during word work that helped to gain letter and sound knowledge and identification. Phonemic awareness drills helped to promote students sound and decoding skills. The posters provided a quick and kid friendly visual clue to help read unknown words. The students overall reading growth was the most notable result taken from the action research project. The teacher researchers saw marked growth in letter recognition and beginning sounds. In letter recognition the targeted students represented that 100% (n=21) of the students recognized all 10 of the letters tested. In beginning sounds 100% (n=21) the targeted students recognized all 3 beginning sounds. The teacher researchers concluded that the interventions used during this research project helped to promote reading readiness skills in most of the targeted students. Four appendixes present: (1) Parent Survey; (2) Observational Check List; (3) Site A Baseline Assessment; and (4) Site B Baseline Assessment.

Joint storybook reading and joint writing interventions among low SES preschoolers: differential contributions to early literacy
Aram, D (Aram, D); Biron, S (Biron, S)

This study compared two interventions: one focusing on language and storybook reading and the other on alphabetic skills and writing. Seventy-one preschoolers aged 3-5 from a low SES township in central Israel (35 in the reading program and 36 in the writing program) participated in evaluation of the interventions. Twenty-four untreated preschoolers served as a control group. The children were tested twice, at the beginning and at the end of the school year, in: phonological awareness, word writing, letter knowledge, orthographic awareness, listening comprehension, receptive vocabulary, and general knowledge. Both programs involved games and creative activities. The writing program encouraged letter knowledge, phonological awareness, and functional writing activities. The reading program utilized 11 children's books for focusing on language and exploring major concepts raised by these books. Results indicated that children in the two literacy programs progressed significantly more than the control group on phonological awareness and orthographic awareness. However, the joint writing group significantly outperformed both the joint reading group and the control group on phonological awareness, word writing, orthographic awareness, and letter knowledge. We also found that children as young as 3-4 years gained from literacy programs as much as did older children, aged 4-5, on all the measures assessed in our program.

Brown, M.H.a , Cromer, P.S.b , Weinberg, S.H.c
Shared book experiences in kindergarten: Helping children come to literacy
(1986) Early Childhood Research Quarterly, 1 (4), pp. 397-405.
http://www.scopus.com/inward/record.url?eid=2-s2.0-38249039512&partnerID=40&md5=adbea43fc499d1a436e3fb9c06965502
University of South Carolina, United States; Clarendon School District Number Two, SC, United States; Manning Primary School, SC, United States
Repetitive shared book experiences provided by public school kindergarten staff were used to improve literacy competence and preparation for formal first-grade reading instruction. The entire 1983-1984 kindergarten population (N = 228) of a rural, racially mixed, southeastern school district in South Carolina received eight shared reading experiences for each of three classic children's books. The shared book experience is defined as the situation in which a group of two or three children sit close enough to an adult to see the print as a book is read. Readings were provided by teachers, teacher aides, school volunteers, older students, and audiotapes. The children were individually administered the South Carolina State Department of Education's mandated Cognitive Skills Assessment Battery (Boehm & Slater, 1974) during the first 3 weeks of first grade. The control group, composed of the 1982-1983 kindergarten population (N = 269), had 73% of its children at or above the state cutoff for first-grade readiness, and the experimental group had 83% at or above the cutoff. (T = 22.2, p < .01). In addition, the school district staff reported a 10% increase in the number of children being placed in "top" reading groups. Repetitive, personal shared book experiences were found to enhance literacy awareness and competence, to improve preparation for formal first grade, and to broaden children's literacy interests.

Use of decontextualized talk across story contexts: How oral storytelling and emergent reading can scaffold children's development
Curenton, SM (Curenton, Stephanie M.)1; Craig, MJ (Craig, Michelle Jones)2; Flanigan, N (Flanigan, Nadia)2

This study examined 33 mothers' and preschoolers' oral language skills (decontextualized discourse) across an emergent reading, shared reading, and oral storytelling interaction. The sample comprised primarily African American families from various socioeconomic backgrounds, ranging from Head Start families to middle-income families. Two measures of decontextualized language were assessed-literate language features and type of talk (i.e., a coding scheme categorizing comments/ questions on a continuum from contextualized to decontextualized talk). Mothers used more decontextualized language during the oral storytelling interaction versus the other interactions, but children used more during the emergent reading interaction. Mothers with advanced literacy skills were more likely to make decontextualized comments/questions and use mental/linguistic verbs during the interactions. Results are discussed in terms of implications for parent-child home literacy interventions.

"Can I Say 'Once Upon a Time'?": Kindergarten Children Developing Knowledge of Information Book Language
Duke N.K.; Kays J.
Early Childhood Research Quarterly, Volume 13, Number 2, 1998 , pp. 295-318(24)
In recent years, many scholars have called for greater inclusion of expository texts in early schooling. A first step in assessing the wisdom of these calls is to examine what young children actually know, and can learn, about the language of these reputedly-difficult texts. This study provides information about 20 preliterate kindergartner's knowledge of one genre of expository text, information books, at two points in time--in September, when the children first entered kindergarten, and in December, after children had spent 3 months in a classroom in which information books were read aloud on a near-daily basis. Children's pretend readings of an unfamiliar wordless information book in September contained key features of information book language; their December readings contained far greater use of these features, and among more children. These young children's fast-developing knowledge of information book language provides one indication that inclusion of such texts in early schooling may be well-advised.
DOI: http://dx.doi.org/10.1016/S0885-2006(99)80041-6

Developing Children's Oral Language Skills through Dialogic Reading: Guidelines for Implementation (EJ945985)

Author(s): Flynn, Kylie S.	Pub Date:	2011-00-00
Source: TEACHING Exceptional Children, v44 n2 p8-16 Nov-Dec 2011		

Abstract:
Early childhood and special educators are under growing demands to develop children's language and literacy skills through evidence-based practices. One promising research-based strategy for vocabulary and language development is dialogic reading (DR), which is an interactive picture book reading technique developed in the late 1980's by Whitehurst and colleagues (Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield, 1988). This paper provides an overview of the research and detailed instruction for implementing DR in the classroom setting. The three levels of DR are specifically described to help teachers to scaffold children's oral language development. Recommendations are provided for: 1) extension and enrichment activities, 2) selecting books and vocabulary, and 3) utilizing and managing small groups of children during the lessons. Finally, accommodations and modifications for children with a variety of disabilities are detailed.

Intensifying Instruction Does Additional Instructional Time Make a Difference for the Most At-Risk First Graders?

Harn, BA (Harn, Beth A.)[1]; Linan-Thompson, S (Linan-Thompson, Sylvia)[2]; Roberts, G (Roberts, Gregory)[2]

Research is clear on the benefit of early intervention efforts and the importance of intensive instructional supports; however, understanding which features to intensify is less clear. General intervention features of group size, instructional delivery, and time are areas schools can consider manipulating to intensify instruction. Also, each of these features can vary along a continuum making them easier or more challenging for schools to implement. What is unclear is if implementing very intensive interventions early in school (first grade), which require significantly more school resources, provides accordingly accelerated student learning. This article investigates the role of intensifying instructional time for the most at-risk first graders in schools implementing research-based instructional and assessment practices within multitiered instructional support systems. Results indicate that students receiving more intensive intervention made significantly more progress across a range of early reading measures. Intervention features, limitations, recommendations for practice, and implications for treatment resisters are discussed.

Print Reading in General Education Kindergarten Classrooms: What Does It Look Like for Students At-Risk for Reading Difficulties? (EJ964215)

Author(s):	Kent, Shawn C.; Wanzek, Jeanne; Al Otaiba, Stephanie	Pub Date:	2012-05-00
Source:	Learning Disabilities Research & Practice, v27 n2 p56-65 May 2012		

Abstract:

The purpose of this study was to examine the amount of time spent actively engaged in reading sounds, words, and connected text for students at-risk for reading difficulties in the first formal grade of reading instruction, kindergarten. Observational data of 109 kindergarten students at high-risk for later reading difficulties were collected during general education reading instruction across the school year. Findings revealed students read orally for just over 1 minute during their reading instruction with approximately equal time spent reading sounds, words, or connected text. Implications of these results for early reading instruction and intervention for students at-risk for reading difficulties or disabilities are presented.

Manipulating Word Properties: Targeting Vocabulary Learning for Children with and without Speech Sound Inaccuracies (EJ957495)

Author(s):	McDowell, Kimberly D.; Carroll, Jeri	Pub Date:	2012-02-00
Source:	Child Language Teaching and Therapy, v28 n1 p101-121 Feb 2012		

Abstract:

The purpose of this study was twofold: (1) to examine the relations between speech sound accuracy, vocabulary, and phonological awareness, and (2) to examine the effect of word properties of neighborhood density and phonotactic probability on word learning within a storybook context, for children with and without speech sound inaccuracies. Fifty K-1 children (aged 5-6 years; 25 with, 25 without speech sound inaccuracies) completed inclusionary measures of oral language, speech sound accuracy, hearing screening, oral-motor screening, and nonverbal intelligence. Participants completed study-specific measures of standardized receptive and expressive vocabulary, stimuli-specific vocabulary knowledge, and phonological awareness. Twice weekly, for 30 minutes, an 11-week storybook-based intervention took place, targeting word learning, with words selected based on density and probability. Storybooks were researcher generated to intentionally manipulate the word properties of the stimuli words. Each storybook contained two stimuli words, four exposures per word per reading. Results indicated that both speech sound accuracy and vocabulary predicted unique variance in phonological awareness in children with speech sound inaccuracies. No statistically significant differences in the absolute number of words children learned emerged. Group differences were noted in emerging word knowledge with typically developing children outperforming children with speech sound inaccuracies. Differences were noted in the types of words that children learned. Results suggest that children with speech sound inaccuracies may be at risk for later reading difficulties. Speech language pathologists need to be targeting words that promote change within a child's phonological system (sublexical) and his/her lexical system.

Early Signs of Self-Regulating Print: Kindergartners at Work Reading to Understand Fiction and Nonfiction Text (EJ959772)

Abstract:
The purpose of this study was to examine how 28 kindergartners in two half-day classrooms from a rural midwestern school monitored and self-regulated their understanding of texts (fiction and nonfiction) while reading. Three different interviews (fall, early spring, and late spring) were conducted while the children read from one of two self-selected books offered in each setting: (1) fiction in the fall (to develop routines), (2) nonfiction in the early spring, and (3) fiction in late spring. The interview protocol included questions to examine what the children were thinking as they read and what strategies were used to understand. Observational data also were collected. The results revealed that these kindergartners used strategies while reading, although more strategies (e.g., pictures) were used to construct the meaning of the nonfiction text. More often, the children considered themselves as "readers" with the nonfiction. Words were noted as important to the children as they pointed out words they did not know. This study shows the importance of the use of a variety of texts in the early primary grades to guide children's development of strategies to understand text.

Interactive Book Reading in Early Education: A Tool to Stimulate Print Knowledge as Well as Oral Language (EJ879465)

Author(s): Mol, Suzanne E.; Bus, Adriana G.; de Jong, Maria T.

Pub Date: 2009-00-00

Abstract:
This meta-analysis examines to what extent interactive storybook reading stimulates two pillars of learning to read: vocabulary and print knowledge. The authors quantitatively reviewed 31 (quasi) experiments (n = 2,049 children) in which educators were trained to encourage children to be actively involved before, during, and after joint book reading. A moderate effect size was found for oral language skills, implying that both quality of book reading in classrooms and frequency are important. Although teaching print-related skills is not part of interactive reading programs, 7% of the variance in kindergarten children's alphabetic knowledge could be attributed to the intervention. The study also shows that findings with experimenters were simply not replicable in a natural classroom setting. Further research is needed to disentangle the processes that explain the effects of interactive reading on children's print knowledge and the strategies that may help transfer intervention effects from researchers to children's own teachers.

Teaching narrative comprehension strategies to first graders
Paris, AH (Paris, Alison H.); Paris, SG (Paris, Scott G.)
COGNITION AND INSTRUCTION Volume: 25   Issue: 1   Pages: 1-44   Published: 2007
This study provided 5 weeks of direct strategy instruction about narrative elements and relations in 4 first-grade classrooms (n = 83), all with materials that made minimal decoding demands on children's reading. Two comparison classrooms (n = 40) received comparable instruction on language development and poetry. A battery of assessments given at pretest and posttest showed that the intervention benefited children's comprehension of narratives in the picture-viewing modality as well as narrative meaning-making in listening comprehension and oral production modalities. Understanding and recall of main narrative elements improved, as did inference-making skills and understanding the psychological aspects of stories. Implications for enhancing beginning readers' emerging narrative knowledge in primary grade classrooms are discussed.

Effects of Daily Read-Alouds on Students' Sustained Silent Reading
(EJ938970)

Author(s): Pegg, Lauren A.; Bartelheim, Frederick J.

Pub Date: 2011-00-00

Abstract:
This action research project investigated the effects of daily teacher read-alouds on first graders' ability to sustain silent reading for an extended length of time. Students' enjoyment of silent reading was also investigated. The data on ability to sustain silent reading was collected from timed silent reading experiences, and a pre and post survey completed by students on their enjoyment and performance during silent reading time. The findings of the study suggest an increase in the length of time students silently read to themselves as a result of daily teacher read-alouds. Additionally, survey comments suggested an increase in enjoyment of silent reading as a result of the daily read-alouds.

(Contains 1 figure and 3 tables.)

A comparison of three methods of vocabulary instruction during read-alouds in kindergarten
Silverman, R (Silverman, Rebecca)
ELEMENTARY SCHOOL JOURNAL Volume: 108   Issue: 2   Pages: 97-113   DOI: 10.1086/525549   Published: NOV 2007

This article presents results from 2 studies comparing 3 approaches to teaching vocabulary during storybook reading: (a) contextual instruction, based on connecting words to their use in books and to children's personal experience; (b) analytical instruction, which enhances contextual instruction with semantic analysis of words in contexts other than the books and children's experience; and (c) anchored instruction, which augments analytical instruction with attention to the spoken and written forms of words. Each approach was implemented by classroom teachers in 2 of 6 kindergarten classrooms from 2 schools for 6 weeks. In the first study, I compared the effects of these approaches on 94 children's learning of taught words at the end of the intervention. The second study investigated the effects of instruction with 50 children from the original study 6 months after the intervention, when the children were in first grade. Of the children in the study, about a third were English language learners, and about a third were from low socioeconomic status families. I assessed children's knowledge of the words targeted in the intervention through a picture and oral vocabulary measure that I developed based on the format of the Test of Language Development P:3, which I administered and used as a control for children's general vocabulary knowledge. Results suggested that both the analytical and anchored methods of instruction were significantly more effective than the contextual method at promoting children's learning of words targeted in instruction.

A Synthesis of Read-Aloud Interventions on Early Reading Outcomes among Preschool through Third Graders at Risk for Reading Difficulties (EJ923007)

Abstract:
A synthesis and meta-analysis of the extant research on the effects of storybook read-aloud interventions for children at risk for reading difficulties ages 3 to 8 is provided. A total of 29 studies met criteria for the synthesis, with 18 studies providing sufficient data for inclusion in the meta-analysis. Read-aloud instruction has been examined using dialogic reading; repeated reading of stories; story reading with limited questioning before, during, and/or after reading; computer-assisted story reading; and story reading with extended vocabulary activities. Significant, positive effects on children's language, phonological awareness, print concepts, comprehension, and vocabulary outcomes were found. Despite the positive effects for read-aloud interventions, only a small amount of outcome variance was accounted for by intervention type. (Contains 7 tables.)

Story construction from a picture book: An assessment activity for young learners
vanKraayenoord, CE (vanKraayenoord, CE); Paris, SG (Paris, SG)
EARLY CHILDHOOD RESEARCH QUARTERLY Volume: 11   Issue: 1   Pages: 41-61

Meaning-making is the foundation of literacy during children's early years in school because it involves constructive comprehension from what is seen or read or heard. Most assessments of children's literacy depend on their abilities to decode or write text, which may limit the complexity of understanding that can be assessed. We designed a novel activity, Story Construction from a Picture Book, to assess young children's abilities to construct meaning independent of decoding skills. The task requires active processes of comprehending the relations among a series of pictures and composing orally a story that connects the meaning among events. This study describes the performance of 5- and 6-year-old children on the Story Construction activity and relates their skills to other measures of literacy development undertaken concurrently, as well as 2 years later. We suggest that activities like the Story Construction activity are valuable assessments of young children's constructive comprehension processes that complement traditional assessments of emerging literacy skills.

Effects of story reading on language
Vivas, E (Vivas, E)
This article reports the results of an experimental investigation of the effects of a systematic, story-reading-aloud program on some language variables in 222 preschool and first-grade children. They were randomly assigned to 3 groups: 2 experimental and 1 control. The program was carried out by the parents, at home, for the children in the Home-Based Experimental group and by the teacher, at school, for the School-Based Experimental children. I assessed the effects of the programs both on language comprehension (the understanding of syntactic structures and story comprehension) and on expressive language (syntactic structures and sentence repetition). Results indicated that both preschool and first-grade children significantly increased their language comprehension and expression when listening to stories read aloud, either at home or at school. The program is discussed in terms of its usefulness in language stimulation and as an instrument for prevention of language difficulties.

Assessment Data-Informed Guidance to Individualize Kindergarten Reading Instruction: Findings from a Cluster-Randomized Control Field Trial
Al Otaiba, Stephanie Connor, Carol M. Folsom, Jessica SGreulich, Luana˛Meadows, Jane˛Li, Zhi
Elementary School Journal vol. 111, no. 4 (June 2011), p. 535-560
The purpose of this cluster-randomized control field trial was to examine whether kindergarten teachers could learn to differentiate classroom reading instruction using Individualized Student Instruction for Kindergarten (ISI-K) and to test the efficacy of differentiation on reading outcomes. The study involved 14 schools, 23 ISI-K (n = 305 students) and 21 contrast teachers (n = 251 students). Data sources included classroom observations, parent surveys, and student assessments of language, cognitive, and reading skills. Hierarchical multivariate linear modeling revealed that students in ISI-K classrooms outperformed contrast students on a latent measure of reading skills (ES = 0.52). Teachers in both conditions provided small-group instruction, but teachers in the ISI-K condition provided significantly more individualized instruction. Findings are discussed regarding professional development to differentiate core reading instruction and the challenge of using Response to Intervention approaches to address students' needs in the areas of reading.

Emergent Literacy Intervention for Prekindergarteners at Risk for Reading Failure
Bailet, LL (Bailet, Laura L.); Repper, KK (Repper, Karla K.); Piasta, SB (Piasta, Shayne B.)[1]; Murphy, SP (Murphy, Suzanne P.)
JOURNAL OF LEARNING DISABILITIES Volume: 42 Issue: 4 Pages: 336-355 DOI: 10.1177/0022219409335218 Published: JUL-AUG 2009
This study examined the effectiveness of an assessment and intervention study targeting prekindergarten children at risk for reading failure. Across 38 child care sites, 220 children were identified as "at risk" for reading failure due to their performance on a screening measure of early literacy skills and randomly assigned to receive immediate or delayed intervention. The intervention consisted of eighteen 30-minute lessons delivered twice weekly for 9 weeks and focused on teaching critical emergent literacy skills within small groups. Hierarchical linear models were used to nest children within center and measure treatment and dosage effects for students' residualized gains in rhyming, alliteration, picture naming, and print and letter knowledge skills. Results indicated significant treatment effects on two of four outcome variables (rhyming and alliteration) and significant dosage effects on all four variables. The study demonstrated a significant positive impact of this intervention for prekindergartners at risk for reading failure.

Early reading intervention for English language learners at-risk for learning disabilities: Student and teacher outcomes in an urban school
Haager, D (Haager, D); Windmueller, MP (Windmueller, MP) LEARNING DISABILITY QUARTERLY Volume: 24 Issue: 4 Pages: 235-250 DOI: 10.2307/1511113 Published: FAL 2001
Student and teacher outcomes following the first year of implementation of an early reading intervention project designed to improve literacy outcomes in one urban school are described. The intervention was delivered through ongoing supplemental reading instruction for English language learners (ELLs) at-risk of reading failure. Students at-risk for reading-related learning disabilities were identified using the Dynamic Indicators or Basic Early Literacy Skills (DIBELS), a performance-based reading assessment. Students at-risk and students with learning disabilities (LD) received supplemental small-group reading instruction provided by the classroom teacher and support personnel implementing an inclusive special education program. Results indicated positive growth for ELLs, with a disproportionately large percentage of students falling into the risk range. At-risk and LD students showed

steady improvement, supporting the coupling of an inclusive special education program with reading intervention in the primary grades. Teacher reports indicated that professional development should be grounded in the reality of classroom experience.

Hatcher, P.J.a , Hulme, C.a , Miles, J.N.V.a , Carroll, J.M.b , Hatcher, J.c , Gibbs, S.d , Smith, G.d , Bowyer-Crane, C.a , Snowling, M.J.a
Efficacy of small group reading intervention for beginning readers with reading-delay: A randomised controlled trial
(2006) Journal of Child Psychology and Psychiatry and Allied Disciplines, 47 (8), pp. 820-827.
http://www.scopus.com/inward/record.url?eid=2-s2.0-33746126113&partnerID=40&md5=d934e672a4dff25fc33577209dfd4865
University of York, Department of Psychology, York YO10 5DD, United Kingdom; University of Warwick, Coventry, United Kingdom; Dyslexia Institute, University of York, York, United Kingdom; North Yorkshire Education Service, United Kingdom
Background: This study evaluated the effectiveness of an intervention for reading-delayed children in Year-1 classes. Methods: A sample (N = 77) of children drawn from 14 schools representing those with the weakest reading skills were randomly allocated to one of two groups. A 20-week intervention group received the intervention for two consecutive 10-week periods, while a 10-week intervention group only received the intervention for the second 10 weeks of the study. The programme was delivered in daily 20-minute sessions that alternated between small group (N = 3) and individual teaching. The programme combined phoneme awareness training, word and text reading, and phonological linkage exercises. Results: The children receiving the intervention during the first 10-week period made significantly more progress on measures of letter knowledge, single word reading, and phoneme awareness than children not receiving the intervention. However, the children who only received the intervention during the second 10-week period made rapid progress and appeared to catch up with the children who had been given the more prolonged intervention. Failure to respond to the intervention was predicted by poor initial literacy skills and being in receipt of free school meals. Conclusions: A reading intervention programme delivered on a daily basis by trained teaching assistants is an effective intervention for children who show reading delays at the end of their first year in school. However, around one-quarter of the children did not respond to this intervention and these children would appear to need more intensive or more prolonged help to improve their reading skills.

Early Intervention in Reading From Research to Practice
Menzies, HM (Menzies, Holly M.)[1]; Mahdavi, JN (Mahdavi, Jennifer N.)[2]; Lewis, JL (Lewis, James L.)[3] REMEDIAL AND SPECIAL EDUCATION Volume: 29   Issue: 2   Pages: 67-77   DOI: 10.1177/0741932508315844   Published: MAR-APR 2008
This study documents the implementation of research-based strategies to minimize the occurrence of reading difficulties in a first-grade population. Three strategies were implemented: (a) A system of progress monitoring was used to assess student progress and skill acquisition; (b) instruction was characterized by high intensity through the use of groups with a low student-teacher ratio; and (c) an explicit instructional approach was used for children who lacked phonemic awareness or an understanding of the alphabetic principle. Furthermore, teachers were supported in working collaboratively with one another and were provided with ongoing support from a literacy coach. Ninety percent of participants met or exceeded grade-level expectations by the end of the year, and 75% of treatment resisters were eligible for special education. Challenges related to implementation are discussed.

The application of a prevention model of resource teacher support to at risk kindergarten pupils.
Reynolds, M Y

The application of a prevention model of resource teacher support to at risk kindergarten pupils. (1987)

The efficacy of a resource teacher preventative model in the teaching of kindergarten reading was investigated in a preliminary formative study. The components of the model were intervention during early learning; ability level programming and practice for each individual; control of early learning through the use of an S - S model of learning; and a reliable procedure for identification of at risk student. The experimental subjects were 27 students identified as at risk through curriculum based assessment. The 12 week study featured a pretest posttest design, the collection of individual progress data and a comparison of previous grade achievement. Results of the posttest and weekly testing data showed that all subjects had progressed in the learning of sight words at a rate consistent with meeting criterion standards for the grade. Few implications can be drawn from this study at the present time. However several refinements to the preventative model are suggested.

A Diagnostic Teaching Intervention for Classroom Teachers: Helping Struggling Readers in Early Elementary School (EJ974598)

Author(s): Vernon-Feagans, Lynne; Gallagher, Kathleen; Ginsberg, Marnie C.; Amendum, Steve; Kainz, Kirsten; Rose, Jason; Burchinal, Margaret

Pub Date: 2010-11-00

Source: Learning Disabilities Research & Practice, v25 n4 p183-193 Nov 2010

Abstract:

With the advent of "Response to Intervention" there has been emphasis on preventing reading disabilities. This study examined the effectiveness of a classroom teacher Tier II intervention for struggling readers in kindergarten and first grade called the Targeted Reading Intervention. Three rural schools were randomly assigned to experimental and control conditions, with 8 experimental and 12 control classrooms. Five struggling and five non-struggling readers were randomly selected from each classroom. With the support of biweekly coaching, experimental teachers instructed struggling readers in one-on-one sessions in the classroom. Intent-to-treat analyses revealed significant kindergarten gains for initial word identification but no significant gains in first grade. Discussion focuses on the use of classroom teachers to prevent reading disabilities.

Peer Learning

[Young Children's Opportunities to Use and Learn Theme-Related Vocabulary through Buddy "Reading"](#) (EJ974937)

Author(s): [Christ, Tanya](#); [Wang, X. Christine](#) Pub Date: 2012-00-00

Source: Literacy Research and
Instruction, v51 n4 p273-291
2012

Abstract:
This qualitative study examined whether and how preschoolers' social interactions during buddy "reading" supported their use and learning of theme-related vocabulary. Data included 32 transcribed videos of 14 preschoolers engaged in buddy "reading." Interaction analysis and constant comparative methods were applied to identify (1) patterns of social interactions that occurred, (2) patterns of opportunities for children to use and learn themed vocabulary, and (3) patterns that hindered such vocabulary opportunities. Findings included three patterns of social interactions: collaborative, tutor-tutee, and parallel. Each differentially affected opportunities for using and learning theme-related vocabulary. Opportunities to use and learn words occurred when children provided exposures to vocabulary words or clarified concept knowledge for their buddy. Opportunities were hindered when buddies struggled over participation, "reading" roles, or content.

Peer-assisted learning strategies: Making classrooms more responsive to diversity
[Fuchs, D](#) (Fuchs, D); [Fuchs, LS](#) (Fuchs, LS); [Mathes, PG](#) (Mathes, PG); [Simmons, DC](#) (Simmons, DC)
AMERICAN EDUCATIONAL RESEARCH JOURNAL Volume: 34   Issue: 1   Pages: 174-206   DOI: 10.3102/00028312034001174   Published: SPR 1997
The primary focus of this study was to determine the effectiveness of a classwide peer tutoring program in reading for three learner types: low achievers with and without disabilities and average achievers. Twelve schools, stratified on student achievement and family income, were assigned randomly to experiment and control groups. Twenty teachers implemented the peer tutoring program for 15 weeks; 20 did not implement it. In each of the 40 classrooms data were collected systematically on three students representing the three learner types. Pre- and posttreatment reading achievement data were collected on three measures of the the Comprehensive Reading Assessment Battery. Findings indicated that, irrespective of type of measure and type of learner, students in peer tutoring classrooms demonstrated greater reading progress. Implications for policymaking are discussed.

Achievement, Placement, And Services - Middle School Benefits Of Classwide Peer Tutoring Used At The Elementary-School
[GREENWOOD, CR](#) (GREENWOOD, CR); [TERRY, B](#) (TERRY, B); [UTLEY, CA](#) (UTLEY, CA); [MONTAGNA, D](#) (MONTAGNA, D); [WALKER, D](#) (WALKER, D)
SCHOOL PSYCHOLOGY REVIEW Volume: 22   Issue: 3   Pages: 497-516   Published: 1993
In a longitudinal, experimental field trial that spanned Grades 1 to 4, we reported that changes in classroom processes produced by the ClassWide Peer Tutoring (CWPT) Program covaried with statistically and educationally significant levels of growth in at-risk students' academic achievement on the Metropolitan Achievement Test (Greenwood, 1991; Greenwood, Delquadri, & Hall, 1989). In the present study, we investigated follow-up outcomes 2 years later at the end of sixth grade in middle school. After controlling for initial

differences in first grade IQ (Otis & Lennon, 1979) and achievement (NCEs), comparisons between two at-risk, low SES groups (i.e., control and experimental CWPT) and a nonrisk index group 6 years later, indicated that the CWPT and index groups had: (a) maintained a significant advantage in growth on the reading, language, and mathematics subscales of the Comprehensive Test of Basic Skills (NCEs), although some effect sizes were reduced, (b) produced significantly higher performance on the science and social studies subscales not previously assessed; and (c) realized significantly fewer group members placed into special education programs between first and sixth grade who had also received less restrictive services. Comparisons between the CWPT and index groups indicated that the CWPT group performed as well as the index group on approximately one-half of the comparisons made. The implications of these findings for both prevention and for prereferral intervention in the regular education program are discussed.

Do peers influence children's skill development in preschool?
Henry, GT (Henry, Gary T.); Rickman, DK (Rickman, Dana K.)
ECONOMICS OF EDUCATION REVIEW Volume: 26 Issue: 1 Pages: 100-112 DOI: 10.1016/j.econedurev.2005.09.006 Published: FEB 2007
Currently, a disjuncture exists between the economic literature on young children's outcomes from early education or child care and the literature on schooling outcomes of older children and adolescents. Peer effects have been found to be both theoretically important and empirically significant in school settings, yet the effects of peers have not been incorporated into research estimating the child development production function. In this study, we estimate the value-added effects of peer abilities on the educational outcomes of a probability sample of four year olds who attended Head Start, publicly subsidized pre-kindergarten, or private preschool in Georgia. We use a longitudinal data set that includes measures of preschool quality, child and family characteristics, peer abilities, and assessments of the skills of pre-kindergarteners both before and after attending preschool. The ability level of the peers in a child's classroom has direct and positive effects on the child's cognitive skills, pre-reading skills, and expressive language skills after controlling for preschool resources, family characteristics, and the child's skills at the beginning of preschool. Neither time spent on discipline, nor contextual effects of classroom composition, nor teachers' motivation appear to be the mechanisms that explain the influences of peers on children's skill development.

Children learning with peers: The confluence of peer status and literacy competence within small-group literacy events
Matthews, MW (Matthews, MW); Kesner, J (Kesner, J)
READING RESEARCH QUARTERLY Volume: 38 Issue: 2 Pages: 208-234 DOI: 10.1598/RRQ.38.2.3 Published: APR-JUN 2003
This study investigated the interactions of 16 first-grade children during one academic year as they participated in literacy events with their peers. Of particular interest was how children with different levels of acceptance from their peers and different levels of reading achievement experienced collaborative peer-only literacy events. A sociocultural perspective guided the investigation. Constructs related to the individual psychology of the children were also considered to gain insights into experiences of individual children. Data included 138 hours of classroom observations, video and/or audiotapes of the children as they participated in collaborative literacy events, assessments of the children's reading ability, and assessments of the children's acceptance by their peers. A constant comparative method guided the data analysis. The analysis suggests that issues related to peer acceptance and reading competence complicate children's interactions during collaborative literacy events. While interactions during these events are a source of support for some, they may be a source of stress for others. Concepts critical to understanding how children with different levels of acceptance from peers and different levels of reading achievement

experience these events are presented. Implications for classroom teachers and for researchers are presented.

Peer-Assisted Learning/Literacy Strategies. What Works Clearinghouse Intervention Report (ED531596)

Author(s): N/A		Pub Date:	2012-05-00
Source:	What Works Clearinghouse	Pub Type(s):	Reports - Evaluative
		Peer Reviewed:	Yes

Abstract:
"Peer-Assisted Learning Strategies" and a similar program known as "Peer-Assisted Literacy Strategies" are peer-tutoring programs that supplement the primary reading curriculum (Fuchs, Fuchs, Kazdan, & Allen, 1999; Mathes & Babyak, 2001). This review uses the acronym "PALS" to encompass both programs and their respective full names when referring to a specific program. Students in "PALS" classrooms work in pairs on reading activities intended to improve reading accuracy, fluency, and comprehension. Students in the pairs--who alternately take on the role of tutor and tutee--read aloud, listen to their partner read, and provide feedback during various structured activities. Teachers train students to use the following learning strategies: passage reading with partners, paragraph "shrinking" (or describing the main idea), and prediction relay (predicting what is likely to happen next in the passage). "PALS" includes separate versions for kindergarten and grade 1. "Peer-Assisted Learning Strategies" also includes versions for grades 2-3 (which are part of a larger set produced for grades 2-6). Forty-five studies reviewed by the What Works Clearinghouse (WWC) investigated the effects of "PALS" on beginning readers. Two studies (McMaster, Fuchs, Fuchs, & Compton, 2005; Stein, Berends, Fuchs, McMaster, Saenz, Yen, & Compton, 2008) are randomized controlled trials that meet WWC evidence standards. One study (Mathes & Babyak, 2001) is a randomized controlled trial that meets WWC evidence standards with reservations. These three studies are summarized in this report. The remaining 42 studies do not meet either WWC eligibility screens or evidence standards. Appended are: (1) Research details for McMaster et al. (2005); (2) Research details for Stein et al. (2008); (3) Research details for Mathes & Babyak (2001); (4) Outcome measures for each domain; (5) Findings included in the rating for the alphabetics domain; (6) Findings included in the rating for the fluency domain; (7) Findings included in the rating for the comprehension domain; and (8) Single-case design studies reviewed for this intervention. A glossary of terms is included. (Contains 8 tables and 11 endnotes.)
ERIC Full Text (374K)

Peer-assisted learning strategies for English language learners with learning disabilities
Saenz, LM (Saenz, LM); Fuchs, LS (Fuchs, LS); Fuchs, D (Fuchs, D)
EXCEPTIONAL CHILDREN Volume: 71 Issue: 3 Pages: 231-247 Published: SPR 2005
This study assessed the effects of Peer-Assisted Learning Strategies (PALS), a reciprocal classwide peer-tutoring strategy, on the reading performance of native Spanish-speaking students with learning disabilities (LD) and their low-, average-, and high-achieving classroom peers. Participants were 132 native Spanish-speaking English language learners (ELL) in Grades 3 through 6, along with their 12 reading teachers. Teachers were assigned randomly to PALS and contrast groups. PALS sessions were conducted 3 times a week for 1.5 weeks. Students were tested before and after treatment. PALS students outgrew contrast students on reading comprehension, and those effects were not mediated by student type.

Direct Instruction

Author(s):	N/A	Pub Date:	2012-07-00
Source:	What Works Clearinghouse	Pub Type(s):	Reports - Evaluative
		Peer Reviewed:	Yes

Abstract:
"Reading Mastery" is designed to provide explicit reading instruction to students in grades pre-K-5. One of several Direct Instruction curricula from McGraw-Hill, "Reading Mastery" is available in two versions: (1) "Reading Mastery Classic" (for grades pre-K-2) aims to help beginning readers identify letter sounds, segment words into sounds, blend sounds into words, develop vocabulary, and begin to learn comprehension strategies. "Reading Mastery Classic" consists of two levels. "Reading Mastery Fast Cycle" is an accelerated program that condenses Levels I and II; (2) "Reading Mastery Signature Edition" (for grades K-5) is organized by grade level and includes three strands: Reading, Language Arts, and Literature. The Reading strand addresses phonemic awareness, phonics, word analysis, fluency, vocabulary, comprehension, spelling, decoding, and word recognition skills. The Language Arts strand focuses on oral language, communication, and writing skills. The Literature strand is designed to provide students with opportunities to read different types of text and to develop their vocabulary. "Reading Mastery" can be used as a supplement to a core reading program or as a stand-alone reading program for students with or without disabilities. This intervention report specifically focuses on the use of "Reading Mastery" to improve the reading and writing skills of students with learning disabilities. Seventeen studies reviewed by the What Works Clearinghouse (WWC) investigated the effects of "Reading Mastery" on students with learning disabilities. Two studies (Cooke, Gibbs, Campbell, & Shalvis, 2004; Herrera, Logan, Cooker, Morris, & Lyman, 1997) are randomized controlled trials that meet WWC evidence standards without reservations. These two studies are summarized in this report. The remaining 15 studies do not meet either WWC eligibility screens or evidence standards. Appended are: (1) Research details for Cooke et al., 2004; (2) Research details for Herrera et al., 1997; (3) Outcome measures for each domain; (4) Findings included in the rating for the alphabetics domain; (5) Findings included in the rating for the reading fluency domain; (6) Findings included in the rating for the reading comprehension domain; and (7) Findings included in the rating for the writing domain. A glossary of terms is included.
ERIC Full Text (293K)

Author(s):	Snel, M. J.; Terwel, J.; Aarnoutse, C. A. J.; van Leeuwe, J. F. J.	Pub Date:	2012-00-00
Source:	Educational Research and Evaluation, v18 n4 p353-374		

2012

Abstract:
In a field experiment with 178 first-grade pupils, the effects of an experimental beginning reading programme were investigated. Both an experimental and a control group worked with the most frequently used Dutch beginning reading programme, "Learning to Read Safely." The instructional approach implemented in the experimental group was guided co-construction (GCC); the instructional approach implemented in the control group was direct instruction (DI). The results of an overall analysis of the development of word recognition (WR) over time (i.e., throughout the 1st grade) showed the pupils in the experimental group to outperform those in the control group. However, the better performance by the experimental group attenuated over time with better performance by the control group on the last measurement occasion. Majority pupils benefitted more from GCC but minority pupils more from DI. Minority pupils in the control group showed greatest progress. (Contains 8 tables and 3 figures.)

Effects of a reading intervention for kindergarten students at risk for emotional disturbance and reading deficits
Trout, AL (Trout, AL); Epstein, MH (Epstein, MH); Mickelson, WT (Mickelson, WT); Nelson, JR (Nelson, JR); Lewis, LM (Lewis, LM)
BEHAVIORAL DISORDERS Volume: 28 Issue: 3 Pages: 313-326 Published: MAY 2003
Although students with or at risk for emotional disturbance present significant academic challenges, few researchers have studied the outcomes of interventions designed to improve the reading skills of this population, In this study we assessed the outcomes of a supplemental daily Direct Instruction reading curriculum, Reading Mastery 1, and fluency building program, Great Leaps, on the reading skills of students at risk for emotional disturbance and reading deficits. Over a period of 7 months, 6 students received a supplementary reading intervention and 12 students (6 control at-risk and 6 norm-referencing students without disabilities) received their regular classroom instruction. Curriculum-based measures assessing early phonemic awareness and basic reading skills (i.e., letter sounds, blends, and high-frequency sight words) were collected biweekly to assess student performance. The results of this study revealed that at-risk students receiving the Direct Instruction curriculum intervention met or outperformed their control at-risk and norm-referencing peers in all three reading measures. Implications of these findings and areas of future research are discussed.

Computer Assisted Instruction

Do the effects of computer-assisted practice differ for children with reading disabilities with and without IQ-achievement discrepancy?

Jimenez, JE (Jimenez, JE); Ortiz, MD (Ortiz, MD); Rodrigo, M (Rodrigo, M); Hernandez-Valle, I (Hernandez-Valle, I); Ramirez, G (Ramirez, G); Estevez, A (Estevez, A); O'Shanahan, I (O'Shanahan, I); Trabaue, MD (Trabaue, MD)

This study was designed to assess whether the effects of computer-assisted practice on visual word recognition differed for children with reading disabilities (RD) with or without aptitude-achievement discrepancy. A sample of 73 Spanish children with low reading performance was selected using the discrepancy method, based on a standard score comparison (i.e., the difference between IQ and achievement standard scores). The sample was classified into three groups: (1) a group of 14 children with dyslexia (age M 103.85 months; SD = 8.45) who received computer-based reading practice; (2) a group of 31 "garden-variety" (GV) poor readers (age M = 107.06 months; SD = 6.75) who received the same type of instruction; and (3) a group of 28 children with low reading performance (age M = 103.33 months; SD = 9.04) who did not receive computer-assisted practice. Children were pre- and posttested in word recognition, reading comprehension, phonological awareness, and visual and phonological tasks. The results indicated that both computer-assisted intervention groups showed improved word recognition compared to the control group. Nevertheless, children with dyslexia had more difficulties than GV poor readers during computer-based word reading under conditions that required extensive phonological computation, because their performance was more affected by low-frequency words and long words. In conclusion, we did not find empirical evidence in favor of the IQ-achievement discrepancy definition of reading disability, because IQ did not differentially predict treatment outcomes.

Efficacy of Computer-Assisted Instruction for the Development of Early Literacy Skills in Young Children (EJ920179)

Abstract:
Two studies examined the efficacy of using computer-assisted instruction (CAI) to supplement a phonics-based reading curriculum for preschoolers and kindergartners in an urban public school system. The CAI programs provided exercises in phonological awareness and basic phonics skills. We compared treatment classes using CAI with control classes receiving the same classroom instruction without CAI. For preschoolers, the treatment group made significantly greater gains than controls in phonological awareness. For kindergartners, treatment students with low pretest scores made significantly greater gains than controls, particularly in word reading. Overall, preschoolers and low-performing kindergartners benefited from intensive practice provided by CAI programs.

Long-term effects of computer training of phonological awareness in kindergarten
Segers, Eliane; Verhoeven, Ludo

The present study examined the long-term effects of a computer intervention for the development of phonological awareness in Dutch kindergartners. Native Dutch and immigrant children worked with the software 15 min/week during one school year. Following a pretest – interim test – post-test – retention test design, the effects on rhyming, phonemic segmentation, auditory blending, and grapheme knowledge were assessed. The intervention showed significant immediate effects on rhyming and grapheme knowledge. The time spent on the computer games also correlated with the learning gains for the experimental group. In the first grade, retention effects were demonstrated after 4 months of formal reading education.

Computer-Based Reading And Spelling Practice For Children With Learning-Disabilities
VANDAAL, VHP (VANDAAL, VHP); VANDERLEIJ, A (VANDERLEIJ, A)
To examine the effects of computer-based reading and spelling practice on the development of reading and spelling skills, a pretest-training-posttest experiment was conducted in The Netherlands. Eleven girls and 17 boys with written language disorders (on the average, 9 years, 7 months old and performing 2 grades below age expectancy) practiced hard-to-read words under three conditions: reading from the computer screen, copying from the screen, and writing from memory after presentation on the screen. For all words, whole-word sound was available on call during practice. To assess learning effects, both a dictation and a read-aloud task were administered in which nonpracticed control words were also presented. During training, the computer kept record of several aspects of the pupils' learning behavior. It was found that copying words from the screen resulted in significantly fewer spelling errors on the posttest than writing words from memory, and that both forms of spelling practice led to fewer spelling errors than only reading words during practice. All three forms of practice improved to the same degree both the accuracy and fluency of reading the practiced words aloud. The way in which spelling and reading practice, in combination with speech feedback, support the development of phonological skills in children with written language disorders is highlighted in the discussion.

Ebooks

Applying CD-ROM interactive storybooks to learning to read
Adam, N (Adam, N); Wild, M (Wild, M)

This paper describes an investigation into the effect of CD-ROM storybooks on primary students' attitudes towards reading. The degree of change in students' attitudes towards reading on exposure to CD-ROM storybooks was assessed using questionnaires in an experimental pretest-posttest design, together with interviews of reluctant readers and unstructured observations of the treatment group. Results showed that while no significant difference in children's attitudes existed between treatment and control groups after the treatment period, both groups demonstrated a similar development in their attitudes towards traditional reading materials. Further results indicated a significant difference between reluctant and willing readers in the treatment group.

Enhanced recognition of written words and enjoyment of reading in struggling beginner readers through whole-word multimedia software
Karemaker, A (Karemaker, Arjette)[1]; Pitchford, NJ (Pitchford, Nicola J.)[1]; O'Malley, C (O'Malley, Claire)[1]

The effectiveness of a reading intervention using the whole-word multimedia software 'Oxford Reading Tree (ORT) for Clicker' was compared to a reading intervention using traditional ORT Big Books. Developing literacy skills and attitudes towards learning to read were assessed in a group of 17 struggling beginner readers aged 5-6 years. Each child was given each of the two interventions, and the order of intervention was counterbalanced across the group. Each intervention was integrated into the literacy hour over five consecutive days. Measures of written word recognition, written word naming, phonological awareness and attitudes towards computers were taken before and after each intervention. Significant gains in performance were found following both interventions for all of the literacy measures, but significantly greater gains in written word recognition and enjoyment of instruction were found following the Clicker than Big Book intervention. These results suggest that whole-word multimedia software could be a useful classroom aid for supporting early literacy skills in children who are struggling with learning to read.

E-books as support for emergent writing with and without adult assistance
Korat, Ofra[1]; Shamir, Adina[2]; Arbiv, Livnat[2]

The question posed in the current study is whether software alone is a sufficient tool for supporting young children's emergent writing. We researched the effect of reading an electronic book (e-book) on kindergarten children's emergent word writing with and without adult support. Ninety-six 5 to 6 years old children from low socioeconomic status (SES) families were randomly assigned to one of three groups (32 children each): (1) independently reading the e-book; (2) reading the e-book with adult support; (3) receiving the regular kindergarten program (control). Each intervention group received four e-book reading sessions. The children's emergent literacy was assessed before and after the intervention and included letter-name recognition, phonological awareness and emergent word writing. Reading the e-book with adult assistance supported the children's phonological awareness and emergent word writing more significantly than reading the e-book without support and more than the control group. Reading the e-book without adult support did not differ from the control group. Furthermore, the children's initial emergent literacy level and

reading the ebook with adult assistance contributed the most to the children's emergent word writing. Educational implications are discussed.
DOI: http://dx.doi.org/10.1007/s10639-010-9127-7

E-Books Effectiveness in Promoting Phonological Awareness and Concept about Print: A Comparison between Children at Risk for Learning Disabilities and Typically Developing Kindergarteners (EJ934153)

Author(s): Shamir, Adina; Shlafer, Inessa   Pub Date: 2011-11-00

Source: Computers & Education, v57 n3 p1989-1997 Nov 2011

Abstract:
Despite the young child's increasing access to electronic books and the evidence indicating it's effectiveness for promoting emergent literacy, research among young children at risk for learning disabilities is only just beginning. Motivated by this challenge, the study reported here compared the effect of an educational e-book on improvements in Phonological Awareness (PA) and Concept About Print (CAP) among 136 pre-school-aged children at risk for learning disabilities (ALD) and typically developing children (TD). The findings indicated improved performance by both experimental groups, but especially ALD children in the area of CAP. These results are explained by the effectiveness of the multimedia e-book especially for ALD. Implications are discussed.

Beginning readers' use of 'talking books' software can affect their reading strategies
Wood, C (Wood, C)
JOURNAL OF RESEARCH IN READING Volume: 28   Issue: 2   Pages: 170-182   DOI: 10.1111/j.1467-9817.2005.00261.x   Published: MAY 2005
This paper reports on a small-scale study that considered whether a phonic-based 'talking book' could outperform one-to-one reading tuition with an adult with respect to improving beginning readers' phonological awareness over a short period. It also examined whether the children's reading strategies were affected by their use of the software. Two groups of children, one aged five years and one aged six years, used three phonic-based talking books over six 15-minute sessions and were assessed on their phonological awareness and reading strategies both before and after this intervention. Their performance was compared to that of matched comparison groups who were given one-to-one adult tutoring with the paper versions of the same books. There were no significant differences between the two groups in their phonological awareness attainment, with both groups showing equivalent gains from pre- to post-test. Use of specific features of the software was associated with gains in rhyme detection ability and with changes in the children's reading strategies.

Kinaesthetic Methods

[Effects of Traditional versus Tactual/Kinesthetic versus Interactive-Whiteboard Instruction on Primary Students' Vocabulary Achievement- and Attitude-Test Scores](#) (ED519042)

Abstract:

This researcher examined the effects of Traditional versus Tactual/Kinesthetic versus Interactive Whiteboard instruction on short- and long-term word-recall and attitude-test scores of primary students. The sample included 87 children, 45 kindergarten and 42 first-grade students. Participants were 41 males and 46 females from a suburban elementary school in eastern Long Island, NY. "Elementary Learning Style Assessment" (ELSA) (Dunn, Rundle & Burke, 2007) was administered to determine students' learning-style preferences. Using a repeated-measures-counter-balanced design, three subdivided groups were taught sight words in three different instructional methods. Students were taught 45 words, 15 per treatment, and received: pre-tests before each instructional unit, short-term posttests immediately following instruction, and long-term posttests six weeks later. The "Comparative Value Scale" (CVS) (O'Connell, 1999) was administered to determine attitudinal differences. Student achievement was determined by gain-scores derived by subtracting the pre-test scores from both the short- and long-term posttests. The data showed significantly higher short- and long-term word-recall scores when students were instructed through Tactual/Kinesthetic instructional methods over the Traditional (p less than 0.05) or Interactive Whiteboard (p less than 0.001) approaches In addition, students enjoyed learning with Tactual/Kinesthetic resources more than the other methods (p less than 0.001). A correlation analysis indicated that students who were less tactile and those who were analytic processors achieved statistically better with Traditional methods in both the short- and long-term. Amongst lower-achieving students, those with kinesthetic preferences scored significantly better (p less than 0.05) on short-term posttests in the Tactual/Kinesthetic treatment. In addition, less tactile, low-achieving students performed statistically better with Traditional methods (p = 0.01). These findings support that one reading approach may not be appropriate for all students. In this study the Interactive Whiteboard approach was least effective. The researcher acknowledges that shared access and turn taking using Interactive Whiteboards may have undermined student learning gains, as compared to the other treatments. It appears clear, however, that especially for low-achieving students, when instructional presentation is congruent with students' preferred learning modality the greatest achievement gains occur. Overall, students achieved their highest test scores and expressed the most positive attitudes with the Tactual/Kinesthetic resources that engaged the children actively, through Tactual/Kinesthetic activities. [The dissertation citations contained here are published with the permission of ProQuest LLC. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.]

Composite Interventions

An Examination of Treatment Effects of a First Grade Literacy Intervention
Using a Regression Discontinuity Design (ED530445)

Author(s): Chaparro, Erin A.; Smolkowski, Keith; Baker, Scott K.; Fien, Hank; Smith, Jean Louise M.

Source: Society for Research on Educational Effectiveness

Abstract:
Response to Intervention (RTI) is a tiered instructional delivery framework developed to meet the needs of all students and has the potential to improve reading achievement, prevent reading problems, and improve identification accuracy for learning disabilities. Tier 1 typically occurs in the context of the general education classroom and is characterized by evidence-based core instruction. Tier 2 support provides an additional instructional opportunity for students who need re-teaching of previously taught concepts, intensified explicit instruction, and added practice opportunities with high quality teacher feedback. Tier 3 is characterized by highly explicit and systematic instruction delivered in small group formats. The purpose of this poster is to evaluate the efficacy of the Enhancing Core Reading Instruction (ECRI) RTI system designed to prevent reading problems. Using regression discontinuity, the authors compare student reading data between students in Tier 1 and those students receiving Tier 1 and Tier 2 support. In each ECRI intervention school, a fall cut score was used to assign each student to Tier 1 or Tier 2 instructional support (or Tier 3, but this is not a focus in this study). Students in Tier 1 received Tier 1 instructional support and students in Tier 2 received Tiers 1 and 2 instructional supports. Research Hypothesis. They hypothesized that Tier 2 support significantly improves reading. Using a regression discontinuity design (RDD) students in Tier 2 should deviate from the regression line predicted by students in Tier 1.

ERIC Full Text (145K)

Reading and the Kindergarten Child. Kindergarten Reading Guide and Selected Multi-Media.
Drakulich, Theresa
GRADES OR AGES: Kindergarten. SUBJECT MATTER: Reading. ORGANIZATION AND PHYSICAL APPEARANCE: The guide is in two main sections dealing respectively with the course methods and the media. The first section contains information on the philosophy of the program and the three stages of teaching reading in the kindergarten: reading development; initial stage in learning to read; and fundamental reading attitudes, habits, and skills. The second section contains information on multi-media materials suitable for the program. The guide is mimeographed and staple bound with a soft cover and has holes punched for use in a loose-leaf binder. OBJECTIVES AND ACTIVITIES: Combined objectives and activities are listed in the three stages of the first section. INSTRUCTIONAL MATERIALS: Materials listed include reading readiness and perception tests and a multi-reader selection chart which identifies the type of book, level of reading activity, and criteria for selection. A Reading Guide Appendix (SP 007 234) lists all the materials recommended with suggestions for their use. STUDENT ASSESSMENT: No separate criteria for evaluation are included.

Frechtling, J. A. ; Zhang, X. ; Silverstein, G.
The Voyager Universal Literacy System : Results From a Study of Kindergarten Students in Inner-City Schools

The evaluation of the Voyager Universal Literacy System was designed to provide a rigorous assessment of the effectiveness of the program with beginning readers. Using a quasi-experimental design, researchers conducted a systematic evaluation of changes in 398 kindergarten students' command of early reading skills in 4 Voyager and 4 comparison schools in 2 inner-city districts in 8 months from 2002 and 2003. The study provides strong evidence of the efficacy of the Voyager program. Overall and for 3 out of the 4 pairs of schools examined, a large and significant difference was found in favor of the Voyager students. Effect sizes of the program ranged from 0.23 to 1.32 in 7 test instruments. In addition, the average scores of Voyager students at the end of kindergarten were largely around the national average, whereas those of comparison students remained below the national average. Using analysis of covariance models, the study found that the Voyager program has statistically significant positive impacts on student achievement in 6 out of 7 assessments. It also shows that the greater the fidelity of the implemented program to the Voyager plan, the larger the gains in literacy scores.

Program-Fair Evaluation of Instructional Programs: Initial Results of the Kindergarten Reading Readiness Inquiry.
Hanson, Ralph A.
1977
This report describes the construction and use of a conceptual framework and procedures for a program-fair, comparative, classroom-focused assessment of 4 kindergarten reading readiness (KRR) programs in kindergarten classes of 115 school districts. Instructional program information systems were developed to provide the means to aggregate and report information on various instructional attributes (such as pacing, proficiency, placement, patterns of use, and user characteristics) of each KRR program. For each program three "maxi" and "mini" assessment forms were prepared. Each class received a composite measurement instrument which included a "maxi" form covering the outcomes of the program used and a "mini" form covering the major outcomes of one of the 3 other programs. Indications of entering proficiency level of children, program implementation and use, biosocial characteristics of pupils and schools, and subsequent reading proficiency of pupils in all programs were also obtained. Data are reported on several descriptive aspects of implementation and on overall program outcome proficiency attained by users on each outcome of the program they used. Also reported is an analysis of outcome proficiency by program use and instructional emphasis, which is intended to take into account the wide range of within-program variability across classes. Cross-program proficiency data are not given. No claims about the comparative effectiveness of programs are made.

The Impact of Kindergarten Intervention Project Accelerated Literacy on Emerging Literacy Concepts and Second Grade Reading Comprehension.
Hausner, Mary E.
2000
This study investigated the relationship between success of an early intervention program Project Accelerated Literacy in the kindergarten year and success in second grade reading performance. The intervention was given only to students who demonstrated a literacy delay on kindergarten literacy assessments. Subjects were 283 kindergarten students enrolled in 6 at-risk schools in a large urban school district. The experimental group participated in the Project Accelerated Literacy program, an extended day intervention in addition to the half-day kindergarten session; the control group participated only in the kindergarten half-day. All students were tested at the beginning and conclusion of the 30-week intervention using subtests of the Observation Survey. A statistically significant difference between control and experimental groups was found prior to the intervention. After 30 weeks of intervention, the difference between the two groups was no longer statistically significant except in Writing

Vocabulary. The experimental group scored higher than the control group in Writing Vocabulary after the intervention. Two years later, the students were tested for reading comprehension and cognitive ability using the Iowa Test of Basic Skills and the Cognitive Ability Test. The control group scored significantly higher than the experimental group; the difference decreased when scores were adjusted for cognitive ability.

Findings suggest that a kindergarten literacy intervention can significantly increase the literacy scores of low performing students, and that at-risk students need more than one literacy intervention to retain the gains made in their kindergarten year.

Enhancing Emergent Literacy Skills of Preschoolers From Low-Income Environments Through a Classroom-Based Approach

Massetti, GM (Massetti, Greta M.)[1],[2]

Enhancing children's literacy achievement has been identified as a top priority in, education policy and research. Recent federal policies and legislation, such as the No Child Left Behind Act and the Reading First Act, have placed special emphasis on academic readiness for children from disadvantaged backgrounds. The present project evaluated the effect of the Stony Brook Emergent Literacy Project, an approach that combines teacher training, classroom-based activities and teacher-evaluated performance using rubrics to target preschoolers' emergent literacy skills. Ten Head Start classrooms were matched and randomly assigned to implement the Literacy Project or serve as the comparison group Teachers in Literacy Project classrooms implemented 20 group activities and evaluated children's mastery of skills during the activities through rubrics. Children were assessed on their emergent literacy skills by independent evaluators at the beginning and end of the school year. Classrooms that implemented the Literacy Project demonstrated gains in children's emergent literacy skills over the course of the academic year. Results demonstrate the effect of implementing the Literacy Project on children's growth in emergent literacy skills and emphasize the utility of including explicit emergent literacy instruction in early childhood.

O'Connor, R.E., Sanchez, V.
Issues in assessment for intervention in implementation of responsiveness to intervention models

Response to Intervention (RtI) models require valid assessments for decisions regarding whether a student should receive more intensive intervention, whether interventions improve performance, whether a student has improved sufficiently to no longer need intervention, or whether a student should be considered for a formal evaluation for special education. We describe assessment tools used currently in RtI models in reading in kindergarten through third grade, along with how these tools function in multiyear implementations of RtI. In addition to the measurement tools, we describe concerns regarding when RtI models are judged for their effects on reading improvement and the attrition that may inflate these results.

Kindergarten teachers adjust their teaching practices in accordance with children's academic pre-skills

Pakarinen, Eija; Lerkkanen, Marja-Kristiina; Poikkeus, Anna-Maija; Siekkinen, Martti; Nurmi, Jari-Erik

This study examined the extent to which kindergarten children's academic pre-skills are associated with their teachers' subsequent teaching practices. The pre-skills in reading and

math of 1268 children (655 boys, 613 girls) were measured in kindergarten in the fall. A pair of trained observers used the Classroom Assessment Scoring System instrument to observe 49 kindergarten teachers on their emotional support, classroom organisation and instructional support in kindergarten in the spring. The results of the multilevel modelling showed that low levels of academic pre-skills in kindergarten classrooms in the fall predicted high classroom quality in the classrooms later on. The results suggest that the overall level of children's academic pre-skills in the classroom plays an important role in the ways in which teachers adapt their instructional practices to the needs of a particular classroom

Evaluation of the Waterford Early Reading Program in Kindergarten, 2005-06
Powers, Stephen: Price-Johnson, Connie
Year: 2006
Background: The Waterford Early Reading Program (WERP), a technology-based program for early elementary grades, was provided through Arizona all day kindergarten funds to kindergarten students in 15 Title I elementary schools in the Tucson Unified School District (TUSD) in the 2005-06 school year. The purpose of this study is to evaluate the reading achievement of kindergartners in the WERP schools and in a Comparison group of 15 schools in the same district. The schools where the WERP was implemented are identified in this report as Schools A-L. The comparison schools are identified as Schools M-AA. Research Design: This evaluation design was a comparison-group study (quasi-experimental design) involving a treatment (WERP) implemented in 15 Title I schools ranked with the highest percentages of students on free/reduced lunch. A Comparison group of 15 schools was selected from those with the next highest percentages of students on free/reduced lunch. The comparison schools did not receive the WERP. Both matching techniques and statistical controls were used to make the groups similar in the analysis. The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Initial Sound Fluency, Letter Naming Fluency, Word Use Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency and the district's Core Curriculum Standard Assessment (CCSA) Reading Test were given as pretests and posttests during the school year. In addition, the amount of time that each kindergartner used the WERP computer software was extracted from the software and used in the analysis. Statistical Analysis: Dependent samples t-tests were used to determine gains for the WERP and Comparison groups, and gain score analysis was used to compare these gains for the WERP and Comparison schools. Analysis of covariance was used to adjust the posttest means for differences on the pretest means of the students. Data were disaggregated by school, gender, ethnicity, pretest achievement quartiles, primary home language, and English language learner (ELL) status in order to determine patterns of achievement among these groups.

Reading and Writing Instruction in Kindergarten: How Often and Who Receives It?
Rathbun, Amy H. Hausken, Elvira Germino
2003
A study used data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K) to answer the following questions: Which of the various reading instructional activities do kindergartners do most often? Who has opportunities to participate in the various types of instructional activities? and Are the various instructional activities found in public school kindergarten classrooms associated with children's reading gains during the kindergarten year? A nationally representative sample of 22,782 children enrolled in 1,277 schools during the 1998-99 school year participated in the study. Children were administered a 2-stage individual assessment in the areas of reading, math, and general knowledge in the fall of 1998 and the spring of 1999. Also, kindergarten teachers were asked to complete a set of self-administered questionnaires about themselves, their students, and their classrooms. This paper analyzes data from the subset of 14,975 children who attended kindergarten for the first time in fall 1998 and were administered a reading assessment in English in both fall and spring of the kindergarten year and who has complete teacher

questionnaire data. Descriptive statistics were used to describe the reading instruction children received in various kindergarten programs, and how instruction differed by the characteristics of the children and their schools. Next, linear regression analyses were used to examine the relationships of the child, family, and kindergarten program characteristics to the gains children made in reading during kindergarten. All results discussed in the paper are statistically significant at the .05 level. Findings suggest that kindergarteners were exposed to a variety of reading activities during the week, and that the frequency of exposure to the different sets of activities and the gain students made in reading were associated with child, family, and school characteristics.

Effects of a Multicomponent Literacy Program and of Supplemental Phonological Sessions on At-Risk Kindergartners
Saint-Laurent L.; Giasson J.
Educational Research and Evaluation, Volume 7, Number 1, March 2001 , pp. 1-33(33)
In this study, a multicomponent literacy program for kindergarten classrooms was developed, implemented and its impact evaluated from the perspective of preventing reading failure and combining the approaches of emergent literacy and phonological awareness. The utility of adding phonological awareness sessions to the program was also assessed. Six classes composed of French-speaking children and located in a low SES area participated in the study, which included a comparison group. At the end of kindergarten, a significant treatment effect was found on Invented Spelling, Phonological Awareness and Reading Orientation. No significant effects on reading scores in Grade 1 were detected. Phonological sessions did not add to the treatment effect on phonological measures and reading scores. The findings confirm the benefits of emergent literacy programs with at-risk kindergartners and the need to pursue further research into strategies to improve the prevention of school failure.
DOI: http://dx.doi.org/10.1076/edre.7.1.1.6928

An assessment of Early Steps: A program for early intervention of reading problems
Santa, CM (Santa, CM); Hoien, T (Hoien, T)
Source: READING RESEARCH QUARTERLY Volume: 34   Issue: 1   Pages: 54-79   DOI: 10.1598/RRQ.34.1.4   Published: JAN-MAR 1999
In this study the authors examine issues related to selecting and evaluating early intervention programs for first graders at serious risk for failing in reading acquisition. The program evaluated is Early Steps, an intervention with one-to-one tutoring and with particular emphasis on story reading, writing, and phonological skills. Four neighborhood schools were selected to participate in the study-two experimental and two control schools. The 49 children came from lower- to middle-class Caucasian families with similar socioeconomic backgrounds. The design of the study includes pre-, post-, and retention assessments of an experimental and a control group. Various tests were used to assess spelling performance, word recognition, nonword reading, and reading comprehension. The results at the end of Grade 1 and at the beginning of Grade 2 indicate that the experimental group performed statistically significantly better than the control group on all variables assessed. In particular, the children with the lowest pretest levels, the very high-risk children, benefit most from the intervention. Their improvement approaches the average performance level after an intervention period of 8 months. We presume that the substantial progress among high-risk children reflects the importance of a balanced approach to beginning reading and the power of the Early Steps program to increase the phonological and word study skills among those children most at risk in this domain.

PAVEd for Success: An Evaluation of a Comprehensive Preliteracy Program for Four-Year-Old Children

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The purpose of the study was to evaluate the effectiveness of PAVEd for Success, comprehensive preliteracy program guidelines to support the development of foundational preliteracy skills in 4 year olds. Prekindergarten teachers received professional development on variables of the program that included a summer institute, after-school workshops, and classroom support from preliteracy specialists. Children were assessed at prekindergarten entry, following the implementation period and at the end of the school year. Vocabulary knowledge, phonological awareness, and alphabet knowledge were assessed during the prekindergarten year, and early literacy indicators and early decoding skills were assessed at the end of the kindergarten year. While all experimental variables showed some benefits to the development of children's preliteracy skills, only the full program benefited children who entered the prekindergarten program at risk for reading difficulties. The program participants benefited in early literacy and decoding skills when compared to controls. Implementation by teachers with support and sustainability of program features without support was also evaluated. Teachers were most likely to implement and sustain program features which shared consistency with some prior literacy focus and when they were able to integrate program features across the curriculum. This research suggests that long-term change in the literacy skills of young children will involve complex and multifaceted approaches to preliteracy development.

Good Beginnings: What Difference Does the Program Make in Preparing Young Children for School?
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Cognitive competencies and motivation were assessed at the beginning and the end of the year for 228 preschoolers and kindergartners and again at the end of the next year (kindergarten or first grade) for 93 of the participants. Participants were in classrooms classified as either emphasizing basic skills in a less positive social climate or de-emphasizing basic skills in a more positive social climate. Cognitive competencies were assessed with two achievement tests (one for letters/reading and another for numbers/math) and six subscales from the McCarthy test. Motivation (perceptions of competence, attitudes toward school, anxiety, affect, risk taking, expectations for success, independence, and persistence) was assessed in an experimental setting and by observing children's behavior in their classroom. The results showed primarily negative effects on both cognitive and motivation outcomes of preschool programs emphasizing basic skills using structured, teacher-directed approaches in a relatively negative social climate. For kindergartners both positive and negative achievement and motivation outcomes were associated with both types of classrooms.

Effects of the "bright start" program in kindergarten on transfer and academic achievement
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Bright Start (Cognitive Curriculum for Young Children; Haywood, Brooks, gr Burns, 1986, 1992) is an early education program designed to increase learning effectiveness and prepare children with the cognitive tools for school learning. Bright Start was systematically applied, for 10 months, with 82 preschool socioeconomically disadvantaged children while 52 children in st comparison group received a skills-based but not cognitively oriented

program. Both static and dynamic assessment (Campione, 1989; Feuerstein, Rand, & Hoffman, 1979; Haywood & Tzuriel, 1992; Lidz, 1987; Tzuriel, 1997) tests were used to evaluate the effectiveness of the program along with tests of task-intrinsic motivation and metacognitive activity. A follow-up study was carried out in Grade 1 to study the program's effects on cognitive performance and on achievement tests in Math and Reading Comprehension. Children in the experimental group improved their performance on different cognitive tasks and showed more task-intrinsic motivation and metacognitive behavior than did those in the comparison group. The cognitive scores on static tests and cognitive modifiability indices on dynamic assessment tasks were compared for each group at pre-treatment, post-treatment, and follow-up. Although lower at pre-test, the experimental group progressively closed the initial gap with the comparison group and showed superiority towards the end of Grade 1. Achievement in Grade 1 Math and Reading showed slight (non-significant) superiority of the experimental over the comparison group, in spite of the relatively limited application of Bright Start, the emphasis on basic readiness skills in the comparison group, and the relatively higher initial cognitive level of children in the comparison group. The results are discussed in relation to developmental aspects and previous findings.

Response to Intervention as a Vehicle for Distinguishing between Children with and without Reading Disabilities: Evidence for the Role of Kindergarten and First-Grade Interventions
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Journal of Learning Disabilities vol. 39, no. 2 (Mar 2006), p. 157-169
Children at risk for early reading difficulties were identified on entry into kindergarten, & half of these children received small-group intervention two to three times a week during their kindergarten year. The other half received whatever remedial assistance was offered by their home schools. These children were again assessed at the beginning of first grade, & those who continued to have difficulties in reading received either one-to-one daily tutoring offered by project teachers from the beginning to the end of first grade or whatever remedial assistance was offered by their home schools over the same time period. All target children were periodically assessed through the end of third grade. Results suggest that either kindergarten intervention alone or kindergarten intervention combined with first-grade intervention are both useful vehicles for preventing early & long-term reading difficulties in most at-risk children.

Reducing Reading Failure for Kindergarten Urban Students: A Study of Early Literacy Instruction, Treatment Quality, and Treatment Duration
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Six instructional assistants taught the Early Reading Intervention (ERI) curriculum to 38 at-risk kindergarten students, and 32 nonrisk students served as comparisons. Student risk was determined based on performance on the Dynamic Indicators of Basic Early Literacy Skills subtests of Nonsense Word Fluency, Letter Naming Fluency, and Phoneme Segmentation Fluency (PSF). The Word Attack (WA) and Letter-Word Identification (LWID) subtests of the Woodcock-Johnson III Tests of Achievement were used to confirm risk status and also as pre- and posttest measures. Treatment students received between 6.85 and 13.70 hr of instruction, with varying degrees of treatment quality. Multiple linear regression was used to analyze the amount of variance in gain scores that could be explained by participation in ERI, treatment quality, and treatment duration. Results showed WA and LWID gains with large effect sizes for treatment students. Findings for treatment quality and duration were mixed, without clear indications of their effects on gain scores.